#### UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF INDIANA FORT WAYNE DIVISION

UNITED STATES	OF AMERICA,	)	
	Plaintiff,	<i>)</i> }	
v.		) No.	F 90-00142
RICHARD YOUNT,	et al.	$\langle$	
	Defendants.	) }	
		)	

# MEMORANDUM OF THE UNITED STATES IN SUPPORT OF MOTION TO ENTER CONSENT DECREE

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#### UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF INDIANA FORT WAYNE DIVISION

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) ) No. F 90-00142
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## MEMORANDUM OF THE UNITED STATES IN SUPPORT OF MOTION TO ENTER CONSENT DECREE

Plaintiff, the United States, on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), hereby submits this memorandum of law in support of its Motion to Enter Consent Decree.

#### I. INTRODUCTION

This is a civil action for injunctive relief and recovery of costs brought pursuant to Sections 106(a) and 107 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §§ 9606(a) and 9607, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"). The action concerns the Marion (Bragg) Dump Site ("Site"), a dump site contaminated with hazardous substances which is located in Grant County, Indiana.

By a complaint filed July 20, 1990, the United States seeks injunctive relief to remedy the release and threatened release of hazardous substances into the environment at the Site. The United States also seeks to recover the response costs it has

incurred and will incur responding to the releases and threatened releases of hazardous substances at the Site.

Simultaneous with filing the Complaint, the United States lodged with this Court a proposed Consent Decree ("Decree") between the United States, the State of Indiana ("State"), 1 and the nine settling defendants -- Dana Corporation, DiversiTech General, Inc., General Motors Corporation, Owens-Illinois, Inc., RCA Corporation, and Essex Group, Inc. ("generator defendants"), and Richard Yount, Ruthadel Yount, and the City of Marion, Indiana -- which resolves the claims asserted by the governments in this action. Under the Decree, settling defendants have agreed to implement and then maintain the interim remedy selected by EPA in a Record of Decision issued by the Regional Administrator for EPA Region V in September, 1987. In addition, settling defendants will monitor and study the Site in order to ascertain the effectiveness of the interim remedy. Finally, defendants will also pay the oversight costs incurred by EPA and the State monitoring the defendants' work at the Site.

It is estimated that the cost of implementing the remedy is \$7.1 million, and that total package, including oversight costs and the long term operation and maintenance of the interim remedy, will cost approximately \$8.4 million. A portion of the cost of implementation will be borne by the Hazardous Substances

The State of Indiana filed a separate complaint against defendants for claims arising under CERCLA and state law. On October 1, 1990, this Court consolidated that action with the United States' complaint.

Fund, or "Superfund". Specifically, the Decree includes a "mixed funding" agreement under Section 122(b)(1) of CERCLA which "preauthorizes" the generator defendants to make a claim against the Superfund for up to twenty-five percent of eligible costs incurred in implementing the interim remedy, but not to exceed \$1.775 million. Thus, the settling defendants may contribute as much as \$6.625 million worth of work under the settlement.

Pursuant to Section 122 of CERCLA, 42 U.S.C. § 9622, and 28 C.F.R. §50.7, the United States published a notice of the lodging of the Decree in the Federal Register on August 8, 1990. 55 Fed. Reg. 32320. The notice of the lodging described the proposed Decree and invited the public to comment on the Decree for a period of thirty days. Subsequently, at the request of certain persons, the United States extended the public comment period for thirty additional days. 55 Fed. Reg. 38417.

The United States has received a number of written comments on the Decree. Under Section 122 of CERCLA, the Attorney General may "withdraw or withhold consent" to a proposed settlement if comments disclose "facts or considerations" that indicate the proposed settlement is "inappropriate, improper, or inadequate." 42 U.S.C. §9622(d)(2)(B). After reviewing the comments, however, the United States has determined that the Decree is reasonable, fair, and consistent with the purposes of CERCLA. It avoids the wasteful expense and delay of complex litigation, and conserves

The United States' complete written responses to these comments are attached hereto as Exhibit A. Copies of the comments are attached as Exhibit B.

substantial Superfund monies for use at other sites. However, most importantly, it has already resulted in an expedited implementation of most of the interim remedy.

Accordingly, the United States respectfully moves this Court to approve and enter the Decree as a final judgment.

#### II. STATUTORY SCHEME

#### A. CERCLA'S RESPONSE ACTION AND LIABILITY PROVISIONS

Congress enacted CERCIA, first and foremost, to secure "prompt and effective response to problems of national magnitude resulting from hazardous waste disposal." United States v.

Reilly Tar & Chemical Corp., 546 F. Supp. 1100, 1112 (D. Minn. 1982); see Dedham Water Co. v. Cumberland Farms Dairy. Inc., 805 F.2d 1074, 1078 (1st Cir. 1986); United States v. Rohm & Haas Co., 721 F. Supp. 666, 696 (D. N.J. 1989). Second, "Congress intended that those responsible for problems caused by the disposal of chemical poisons bear the costs and responsibility for remedying the harmful conditions they created." Id. To facilitate these fundamental goals, Congress granted the President broad authority and discretion to enforce CERCLA, and select appropriate clean-up measures. The President has primarily delegated this authority to EPA, the federal agency dedicated to protecting the environment. 3

<sup>3</sup> Exec. Order 12,580, 3 C.F.R. 1987 Comp. 193 (1988);
reprinted in 42 U.S.C. §9615 (West Supp. 1988).

#### 1. Enforcement Authority

Under CERCLA, EPA has two primary methods to address hazardous waste sites. First, Section 104 of CERCLA, 42 U.S.C. § 9604, authorizes EPA to perform "response actions," i.e., to respond to sites contaminated with hazardous substances, 4 by using money from the Superfund. 5 Second, Congress recognized that the Superfund, by itself, could not finance all response actions needed to remedy the nation's thousands of hazardous waste sites. Thus, under Section 106 of CERCLA, 42 U.S.C. § 9606, Congress authorized EPA to seek to require responsible parties to undertake response actions. Specifically, Section 106 authorizes EPA to issue administrative orders ordering potentially responsible parties ("PRPs") to perform response actions. Alternatively, (as in this case) it authorizes the United States to seek, through the Attorney General, a court order requiring such actions in the form of injunctive relief.

Replenishment of the costs of government response actions, known as "response costs", is important to the continuing viability of the Superfund. Thus, under Section 107 of CERCLA,

All of the government's efforts responding to a site, including, inter alia, investigation, clean up, and enforcement efforts, are known as "response actions." Response actions include "removal" actions and "remedial actions." See Sections 101(23) and (24) of CERCLA. 42 U.S.C. § 9601(23) and (24).

<sup>5</sup> EPA's response activities under CERCLA are financed by the Hazardous Substance Response Trust Fund established by Section 221 of CERCLA, 42 U.S.C. § 9631, continued as the "Hazardous Substances Fund" or "Superfund" by Section 517 of SARA, 100 Stat. 1613, 1772, adding Section 9507 to the Internal Revenue Code of 1986.

42 U.S.C. §9607, Congress authorized the United States to recover all response costs from PRPs. Section 107(a)(1)-(4) of CERCLA, 42 U.S.C. § 9607(a)(1)-(4), defines these PRPs to include present and past owners and operators of a site and specified categories of generators and transporters of hazardous substances. E.g., United States v. Monsanto, 858 F.2d 160 (4th Cir. 1988), cert. denied, 109 S. Ct. 3156 (1989). Section 107(a) imposes strict, and joint and several liability, where the environmental harm is indivisible. E.g., O'Neil v. Picillo, 883 F.2d 176, 178 (1st Cir. 1989); Monsanto, 858 F.2d 160.6 In addition, PRPs are jointly and severally liable to perform the cleanup if the United States seeks to compel the PRPs to clean up the site under Section 106 of CERCLA.

#### 2. <u>Selecting Response Actions</u>

In addition to these enforcement mechanisms, CERCLA establishes a framework for determining which response actions should be taken at a particular site. CERCLA authorizes EPA to undertake any studies and investigations it deems necessary or appropriate to evaluate site conditions, analyze alternative response actions for the site, and then select a response action—known as the "remedial" action or "remedy"—that EPA deems appropriate for the site. See Sections 104(a)-(b) of CERCLA, 42 U.S.C. §9604(a)-(b). EPA may then implement the selected remedy

See also United States v. Northeastern Pharmaceutical & Chemical Co., 810 F.2d 726, 732 n.3 (8th Cir. 1986), cert. denied, 484 U.S. 848 (1987); United States v. Wade, 577 F. Supp. 1326, 1338 (E.D. Pa. 1983); United States v. Chem-Dyne Corp., 572 F. Supp. 802, 805, 810 (S.D. Ohio 1983).

itself, or may seek to compel PRPs to perform the remedy by administrative order or by obtaining injunctive relief in a district court action. See Section 106 of CERCLA, as discussed, supra.

The National Contingency Plan ("NCP"), 40 C.F.R. § 300 et. seq, promulgated by EPA pursuant to Section 105 of CERCLA, 42 U.S.C. §9605, guides EPA's investigations and other response activities. It provides more detailed guidelines for investigating the environmental problems posed by contamination at a site and identifies the criteria to consider for selecting response actions.

Specifically, the NCP prescribes a three-step administrative process, including early public participation, to select the appropriate remedy. First, typically after a site has been placed on the National Priorities List ("NPL"), 7 EPA conducts or oversees performance of a Remedial Investigation and Feasibility Study ("RI/FS"), which is an in-depth scientific and technical engineering study of the environmental conditions at the site and potential cleanup alternatives. 8 Second, based on the RI/FS, EPA

<sup>&</sup>lt;sup>7</sup> A site does not, however, have to be on the NPL for EPA to perform certain response actions, including an RI/FS. The NPL, <u>see</u> Section 105 of CERCLA; 40° C.F.R. § 300, App. B, lists those uncontrolled releases of hazardous substances that are priorities for long-term remedial evaluation and response. <u>See e.g.</u>, <u>Eagle-Picher Industries</u>, <u>Inc. v. U.S. E.P.A.</u>, 759 F.2d 922 (D.C. Cir. 1985). The Marion (Bragg) site is on the NPL.

The purpose of the RI is to collect data necessary to adequately characterize a site and to assess the extent to which a release poses a threat to human health or the environment. See 40 C.F.R. § 300.430(d). Activities during the RI typically (continued...)

selects a proposed plan for remedial action, and, pursuant to Section 117(a) of CERCLA, 42 U.S.C. §9617(a), PRPs, the State, and the public are provided with notice and an opportunity to comment on the plan. Third, EPA evaluates and responds to the comments it receives, and selects a cleanup alternative or remedy, which it announces in an administrative decision document called the Record of Decision ("ROD"). 9 Judicial review of EPA's remedy decision is limited to the administrative record of decision on an arbitrary and capricious standard. See Section 113(j)(2) of CERCLA, 42 U.S.C. §9613(j)(2).10

### B. CERCLA'S SETTLEMENT PROVISIONS

A fundamental goal of the CERCLA enforcement program has always been to facilitate voluntary settlements in order to expedite remedial actions and minimize litigation. When it

<sup>8(...</sup>continued) include sampling and monitoring of the soil, groundwater, and air at and near the site. In addition to determining the need for remedial action, the RI assesses the extent to which contaminants have migrated from a site and the need for remedial action to control such migration. The objective of the FS is to develop and evaluate remedial alternatives which can be presented to the decisionmaker who will then select the appropriate remedy. See 40 C.F.R. § 300.430(e).

<sup>9</sup> The RI/FS and all related comments and materials considered by EPA in selecting a remedy are maintained in an administrative record that is available to the public. 42 U.S.C. §9613(k). The certified index to the administrative record for the Marion/Bragg site is incorporated into the ROD which is found at Appendix A to the Decree.

<sup>10</sup> See United States v. Seymour Recycling Corp., 554 F. Supp. 1334, 1337 (S.D. Ind. 1982). See also Florida Power & Light v. Lorion, 470 U.S. 729, 744 (1985); National Steel Corp. v. Gorsuch, 700 F.2d 314, 323 (6th Cir. 1983); Northern Ohio Lung Ass'n v. EPA, 572 F.2d 1143 (6th Cir. 1978).

amended CERCLA, in the Superfund Amendments and Reauthorization Act of 1986 ("SARA"), Congress expressly confirmed the importance of entering into negotiations and reaching settlements with PRPs by enacting Section 122 of CERCLA. Section 122, which creates a framework for settling CERCLA claims, authorizes EPA to conduct settlement negotiations and "whenever practicable and in the public interest . . . to facilitate agreements that are in the public interest and consistent with the national contingency plan in order to expedite remedial actions and minimize litigation."

42 U.S.C. § 9622(a). All settlements involving implementation of remedial actions must be set forth in judicial consent decrees.

See Section 122(d) of CERCLA, 42 U.S.C. § 9622(d).

Under Section 122, the United States may enter into a settlement that requires PRPs to undertake response actions themselves and/or to reimburse the United States for response costs incurred and to be incurred. In these settlements, the United States may provide settling PRPs with a covenant not to sue for known conditions at the site. 11 Once a settlement is finalized between a PRP and the United States, Section 113(f) of CERCLA provides the Settling PRP protection by operation of law for matters addressed in the settlement from liability to any other PRPs that may seek contribution from the settlor. 42 U.S.C. § 9613(f)(2); e.g., Rohm & Haas, 721 F. Supp. at 699-700; In re Acushnet River & New Bedford Harbor Litigation, 712 F.

Only in extraordinary circumstances will this covenant extend to liability for unknown conditions discovered in the future. See 42 U.S.C. §9622(f).

Supp. 1019, 1032 (D.Mass. 1989); City of New York v. Exxon Corp., 697 F. Supp. 677, 683 (S.D.N.Y. 1988), appeal pending, No. 89-7624 (2d Cir.). A non-settlor's liability to the United States is not discharged by the settlement, "unless its terms so provide," but the settlement "reduces the potential liability of the [non-settlors] by the amount of the settlement." 42 U.S.C. § 9613(f)(2).

Because the Superfund is not sufficient to fund entire cleanups at all of the Superfund sites located across the nation, it is critical to the accomplishment of Congress' ambitious goals for the Superfund program that PRPs agree to perform or contribute to the work at most Superfund sites. Moreover, private parties are often able to implement EPA's chosen remedy less expensively than the government while achieving the same level of environmental protection. Accordingly, EPA and the Department of Justice have long sought to encourage early settlements of cases involving remedies of Superfund sites where viable PRPs exist with the willingness and expertise to perform EPA's selected remedies.

Congress expressly codified this approach to settlement when it enacted Section 122. 12 As an incentive to such settlements, under Section 122, the United States may elect to compromise past and future response costs claims, particularly if there are

<sup>12</sup> Before Congress enacted Section 122, CERCLA did not contain an explicit provision governing settlements. CERCLA settlements were conducted under the government's inherent authority to settle litigation using the Interim CERCLA Settlement Policy for quidance. 50 Fed. Reg. 5034 (Feb. 5, 1985).

viable non-settlors whom the government can pursue for the balance not recovered from the initial group of settling PRPs.

As a further incentive to settlement, Congress also authorized the United States to enter into a settlement under which a combination of private and Superfund money would pay for the remedy of a particular site. See Section 122(b) of CERCLA. Such arrangements are called "mixed funding" settlements. Congress enacted Section 122(b) because it recognized the United States would need to consider, in certain cases, a settlement for less than 100% of the cost of the selected remedy. See Conference Report on Superfund Amendments and Reauthorization Act of 1986, 99 Cong., 2d Sess. Report 99-962 at 183 (1986). Section 122(b) thereby "reflect[s] the reality that the government will sometimes settle for less than full cleanup costs. . . and then seek to recover remaining costs from nonsettling parties." Report, Impact of Superfund on Small Business, Committee on Small Business, 99th Conq., 1st Sess. 44-45 (1985). In so doing, Congress, expressly authorized EPA to make a "pragmatic assessment of whether settlement for less that 100% will expedite cleanup regardless of liability." Id.

#### III. FACTUAL BACKGROUND

The Marion (Bragg) Site, located in Grant County, Indiana, near the town of Marion, is a dump site which covers approximately 72 acres. The Site accepted waste materials from a number of entities, including the City of Marion, during its operation from 1957 to 1975. In addition to serving as a dump site, from 1935 to 1961, the Site was used as a sand and gravel quarry, and from 1949 to 1970 portions of the Site were used for industrial refuse disposal.

The Site is bordered on the north and east by the Mississinewa River. A large 15-acre pond formed from the sand and gravel quarry operations is located in the center of the site. This pond has occasionally been used for boating and fishing, but is not currently being so used. A large pond of similar size is located off-site in an area along the southern border of the site.

In accordance with the NCP, in 1983, EPA and the State evaluated the Site. EPA determined that the Site was contaminated with a variety of "hazardous substances," as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and on September 8, 1983, EPA listed the Site on the NPL. 48 Fed. Reg. 40,674.

In order to investigate further the nature and extent of contamination at the Site, EPA initiated a Remedial Investigation and Feasibility Study at the Site. The RI Report confirmed that

a number of CERCLA hazardous substances were present at the Site in the soils and groundwater. The FS Report, completed in July of 1987, outlined and analyzed various alternatives for addressing the contamination at the Site.

Based on information gathered during these investigations, in August of 1987, EPA issued a proposed plan for an "interim remedy" for the Site. Rather than address soil and groundwater problems simultaneously, EPA proposed to install a "cap" over the site and collect further data regarding the groundwater. The proposed plan summarized the remedial alternatives for the soil contamination at the Site and identified EPA's preferred interim remedy. In keeping with requirements of CERCLA, EPA published the RI and FS Reports and its proposed plan and provided an opportunity for the public to comment. During the public comment period, EPA held a public meeting on the plan in Marion. 14

After reviewing the public comments, EPA issued a Record of Decision ("ROD") for the Site on September 30, 1987. The ROD outlines the interim remedy selected by EPA for the Site, and responds to the comments received during that comment period. A copy of the ROD is attached to the proposed Decree.

Before it issued the ROD, under the notice procedures established by Section 122(e) of CERCLA, 42 U.S.C. § 9622(e), EPA

The "cap" is a two-foot clay cover, further covered by six inches of top soil.

Prior to the meeting, EPA published notice of the meeting in the local paper, and sent a fact sheet to all those on its mailing list for the Site. In addition, the local paper carried at least two articles announcing the meeting.

sent letters to eighteen (18) entities which, based on its investigations, had been identified as PRPs for the Site.

Subsequently, the United States, the State, and a group of PRPs commenced negotiations aimed at arranging for the implementation of the interim remedy at the Site. Numerous meetings were held between the United States, the State, and PRPs, and between and among the PRPs. Those meetings culminated in the proposed Consent Decree that the United States has lodged with this Court. The Decree reflects the terms of the agreement between the United States, the State, and nine of the PRPs. The governments did not participate in negotiations among the PRPs relating to issues such as allocation of responsibility among PRPs.

The central aspects of the proposed Decree are as follows:

(1) Remedial Work - The Decree provides that the Settling Defendants will finance and perform the remedial work. The remedial work, which parallels the interim remedy selected by EPA in its ROD, includes, (a) construction of a low permeability cover over designated areas at the Site; (b) monitoring to determine the effectiveness and protectiveness of the interim remedy; (c) construction of a fence to prevent access to the site; (d) construction of flood protection measures; and (e) additional studies to determine the effectiveness of the interim remedy in reducing potential groundwater migration. See Section VII of the Decree.

In addition, Section VII(D)(6) of the Decree provided that the parties could agree that the settling defendants would

commence work at the Site even before final entry of this Decree. Here, the parties so agreed and much of the work, including, for example, construction of the cap, has already been completed.

- (2) Oversight Costs In addition to performing the remedial work, the Defendants have agreed to pay all costs incurred by EPA, and the State, in overseeing the work at the Site. These oversight costs were estimated at \$220,000. See Section XVII of the Decree. 15
- (3) Stipulated Penalties The Consent Decree requires the Defendants to pay stipulated penalties in the event of violations of certain portions of the Consent Decree. See Section XVIII of the Decree.
- (5) Covenant Not to Sue In this Decree, subject to exceptions and conditions, the United States and the State only covenant not to sue the Defendants for "covered matters," i.e., for claims under Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), and Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6973, 16 relating to the work performed by defendants at the Site under

As part of the Decree, the United States released its claims against the settling defendants for the approximately \$1.2 million in past response costs incurred by the government conducting response actions to date. The United States may seek to recover those costs in other settlements or civil actions.

<sup>16</sup> Section 7003 of RCRA is very similar to section 106 of CERCLA. It authorizes the United States to require the present or past owners or operators of a treatment storage or disposal facility, as well as the generators and transporters of hazardous waste, to take response actions when the treatment, storage or disposal of hazardous wastes at the facility presents an imminent and substantial endangerment to health or the environment.

this Decree. The covenant is limited, however, as the United States reserves the right to pursue the settling defendants for, inter alia, criminal liability and natural resource damages. In addition, the United States also reserves the right to pursue the settlors for work required to meet any final remedial action chosen by EPA. See Section XIX of the Decree.

#### IV. STANDARD OF REVIEW

#### A. JUDICIAL REVIEW OF CONSENT DECREES

Approval of a consent decree is a judicial act that is committed to the informed discretion of the trial judge. See e.g., Armstrong v. Board of School Directors of City of Milwaukee, 616 F.2d 305, 317 (7th Cir. 1980), reh. den. (decision to enter settlement only reversed for abuse of discretion); Air Line Stewards and Stewardesses Ass'n v. Trans World Airlines, Inc., 630 F.2d 1164, 1167 (7th Cir. 1980); see also United States v. Jones & Laughlin Steel Corp., 804 F.2d 348 (6th Cir. 1986) (Clean Air Act case); Kelley v. Thomas Solvent Co., 717 F. Supp. 507, 515 (W.D. Mich. 1989) (CERCLA case).

Courts, however, exercise this discretion in a limited and deferential manner in order to further the strong policy favoring voluntary settlement of litigation. See Air Line Stewards and Stewardesses Ass'n, 630 F.2d at 1166, citing Metropolitan Housing Development Corp. v. Village of Arlington Heights, 616 F.2d 1006, 1013 (7th Cir. 1980) ("federal courts look with great favor upon the voluntary resolution of litigation through settlement");
United States v. Hooker Chemical & Plastics Corp., 776 F.2d 410,

411 (2nd Cir. 1985); Citizens for a Better Environment v.

Gorsuch, 718 F.2d 1117, 1126 (D.C. Cir. 1983), cert. denied sub

nom. Union Carbide Corp. v. Natural Resources Defense Council.

Inc., 467 U.S. 1219 (1984); United States v. State of Louisiana,
527 F. Supp. 509, 511 (E.D. La. 1981). Thus, a court may only
accept or reject the terms to which the parties have agreed, and
does not, for example, have the power to modify a settlement.

Armstrong, 616 F.2d at 315; Alliance to End Repression v. City of
Chicago, 561 F. Supp. 537, 548 (N.D. Ill. 1982); accord Officers
for Justice v. Civil Service Commission, 688 F.2d 615, 630 (9th
Cir. 1982), cert. denied, 459 U.S. 1217 (1983).

Further, this deferential standard is even more appropriate for settlements negotiated and approved by the United States

Department of Justice and other federal agencies that have responsibility for enforcing federal laws. The balancing of competing interests affected by a proposed consent decree "must be left, in the first instance, to the discretion of the Attorney General." United States v. BASF Corp., slip. op. at 4, No. 89-CV-71180-DT (E.D. Mich. December 20, 1989) (CERCLA case) (attached as Exhibit C); United States v. Bechtel Corp., 648 F.2d 660, 666 (9th Cir. 1981), cert. denied, 454 U.S. 1083 (1981). 17 Judicial deference is particularly warranted where, as in this case, the Justice Department has negotiated a CERCLA decree in conjunction

<sup>17 &</sup>lt;u>See also Sam Fox Publishing Co. v. United States</u>, 366 U.S. 683, 689 (1961); and <u>United States v. Associated Milk Producers, Inc.</u>, 534 F.2d 113, 117 (8th Cir. 1976), <u>cert. denied</u>, 429 U.S. 940 (1976).

with EPA, a federal administrative agency "specially equipped, trained and oriented in the field," to remediate contaminated sites. United States v. Cannons Engineering Corp., 720 F. Supp. 1027, 1035 (D. Mass. 1989), aff'd 899 F.2d 79 (1st. Cir. 1990), citing United States v. National Broadcasting Co., 449 F. Supp. 1127, 1144 (C.D. Cal. 1978). 18 Indeed, where an agency, like EPA, whose mission furthers the public interest, has negotiated an agreement, there is a presumption of validity. New York v. Exxon 697 F. Supp. at 692; Rohm & Haas, 721 F. Supp. at 681.

Moreover, the public policy in favor of settlements is magnified when the settlement furthers statutory purposes. E.g., Village of Arlington Heights, 616 F.2d at 1014; Patterson v. Newspaper & Mail Deliverers' Union of New York, 514 F.2d 767, 771 (2nd Cir. 1975). As the Thomas Solvent court recognized:

There is a 'clear policy in favor of encouraging settlements ... particularly in an area where voluntary compliance by the parties ... will contribute significantly toward ultimate achievement of statutory goals.'

Thomas Solvent, 717 F. Supp at 516, citing Patterson, 514 F.2d 767 at 771. cert. denied sub nom. Larkin v. Patterson, 427 U.S. 911 (1976). This is particularly true in the case of CERCLA settlements because voluntary settlements under CERCLA promote the fundamental goals of the statute and thus advance the broader public policy favoring settlements. See 42 U.S.C. §9622.

<sup>18</sup> See also Thomas Solvent, 717 F. Supp. at 516; Hooker Chemicals, 540 F. Supp. 1067 at 1080.

For example, CERCLA consent decrees advance CERCLA's goal of achieving a prompt response to releases of hazardous substances without a prior determination of liability. See Cannons

Engineering, 899 F.2d 79 at 84; Dedham, 805 F.2d at 1082 ("early resolution of [CERCLA] disputes is a desirable objective"). In addition, settlements achieve CERCLA's goal of placing the ultimate responsibility for cleanup actions on entities that benefited economically from inadequate past disposal practices.

See United States v. South Carolina Recycling & Disposal, Inc., 653 F. Supp. 984, 998 (D.S.C. 1984), aff'd in part and vacated in part on other grounds sub nom. United States v. Monsanto Co., 858 F.2d 160 (4th Cir. 1988), cert. denied, 109 S.Ct. 3156 (1989).

Finally, cleanup of a hazardous waste site is a technically complex undertaking. Responsible parties will more readily conduct a cleanup pursuant to a plan and schedule to which they have agreed. See generally, United States v. City of Jackson, 519 F.2d 1147, 1152 n. 9 ("Because of the consensual nature of the decree, voluntary compliance is rendered more likely, and the government may have expeditious access to the court for appropriate sanctions if compliance is not forthcoming."). A cleanup conducted under the coercive powers of the Court is likely to require more intervention by both EPA and the Court. Settlement is therefore preferable because voluntary compliance will better achieve statutory and public interest goals -- rapid

cleanup of hazardous waste sites. See Hooker Chemicals, 540 F. Supp. at 1072.

B. JUDICIAL REVIEW OF CONSENT DECREES IN CERCLA CASES

Congress and the courts have fashioned a three-part

test under which a court should evaluate a proposed CERCLA

settlement:

The legislative history for the 1986 amendments to CERCLA establishes that a court's role in reviewing a Superfund settlement, is to "satisfy itself that the settlement is reasonable, fair, and consistent with the purposes that CERCLA is intended to serve." H.R. Rep. No. 253, Pt. 3, 99th Cong., 1st Sess. 19 (1985).

Thomas Solvent, 717 F. Supp. at 516. This three-part test -- (1) reasonableness; (2) fairness; and (3) consistency with CERCLA's goals -- conforms to the standards applied by courts evaluating CERCLA settlements before the 1986 amendments. See Cannons Engineering, 899 F.2d at 85; United States v. Conservation Chemical Co., 628 F. Supp. 391, 400 (W.D. Mo. 1985); Seymour Recycling, 554 F. Supp. at 1337-38. This also parallels the standard enunciated by this Circuit for the review of consent decrees. Air Line Stewards and Stewardesses Ass'n, 630 F.2d at 1167; and Metropolitan Housing Development, 616 F.2d at 1015.

Further, although the courts have articulated a number of factors as being potentially relevant to determining whether a CERCLA settlement is fair and reasonable, "the court's core concern in deciding whether to approve [a] proposed decree is with ensuring that the decree furthers the public interest as expressed in CERCLA." Rohm & Haas, 721 F. Supp. at 680; see also Acushnet, 712 F. Supp. at 1027 ("The protection of the public

interest is paramount."); <u>Cannons Engineering</u>, 720 F. Supp. at 1036 ("Protection of the public interest in the key consideration in assessing these factors.")

# V. THE COURT SHOULD APPROVE THE DECREE BECAUSE IT IS REASONABLE, FAIR, AND CONSISTENT WITH THE GOALS AND PURPOSES OF CERCLA

The proposed Decree meets the three-part test described above: the Decree is reasonable, fair, and consistent with the goals and purposes of CERCLA. Nothing in the comments received regarding the proposed Decree suggests otherwise. Nor do any disclose facts that render the Decree "inappropriate, improper, or inadequate." 42 U.S.C. §9622(d)(2)(B). Accordingly, the proposed Decree should be approved and entered as a final judgment.

# A. THE DECREE IS CONSISTENT WITH THE GOALS AND PURPOSES OF CERCLA

The Consent Decree is consistent with and furthers the goals of CERCLA in three crucial respects.

1. The Decree Results in the Expeditious Cleanup of a Hazardous Waste Site At Primarily Private Expense.

CERCLA's primary goal is to promote the expeditious cleanup of hazardous waste sites that pose a threat to human health, welfare or the environment. 19 Courts, therefore, look favorably

<sup>19</sup> Cannons Engineering, 899 F.2d at 90-91; New York v. Shore Realty Corp., 759 F.2d 1032, 1040, n.7 (2d Cir. 1985); BASF slip op. at 6 (E.D. Mich. Dec. 20, 1989); O'Neil v. Picillo, 682 F. Supp. 706, 726 (D.R.I. 1988) aff'd, 883 F.2d 176 (1st Cir. 1989); Lone Pine Steering Committee v. U.S. EPA, 600 F. Supp. 1487, 1489 (D.N.J. 1985), aff'd, 777 F.2d 882 (3d Cir. 1985), cert. denied, 476 U.S. 1115 (1986); Reilly Tar, 546 F. Supp. at 1112.

upon settlements that will result in the expeditious cleanup of hazardous waste sites. See, e.g., Cannons, 899 F.2d at 89;

Hooker Chemicals, 540 F. Supp. at 1079 ("[w]eighing strongly in favor of the approval is the fact that the plan can be implemented immediately"); Seymour Recycling, 554 F. Supp. at 1338-41; Conservation Chemical, 628 F. Supp. at 402.

Here, the Decree requires the Settling Defendants to perform the interim remedy. Thus, entry of the Decree ensures that the interim remedy will be completed promptly, and in full, in accordance with EPA's approved design. Approval of the Decree will thereby further the principal goal of CERCLA.

2. The Decree Requires the Settling Defendants to Finance the Bulk of the Interim Remedy

Congress intended that those responsible for creating the problems caused by the disposal of hazardous substances should bear the costs of remedying the problems. Reilly Tar, 546 F.

Supp. at 1112; Dedham 805 F.2d at 1078; Rohm & Haas, 721 F. Supp. at 696. Indeed, as discussed above, Congress was aware when it enacted CERCLA that the cost of cleanups under CERCLA would exceed the resources of the Superfund. S. Rep. No. 848, 96th Cong. 2d Sess. 17-18 (1980); see Rohm & Haas, 721 F. Supp. at 696; discussion, supra at 19.

Under the instant settlement, defendants, and not the Superfund, will pay for the bulk of the \$8.4 million remedy and all oversight costs which will be incurred by EPA. These funds will instead be available for use at other sites. Moreover, if

the settlement is not approved, the Superfund will bear the burden of substantial additional litigation costs. 20

3. The Decree Furthers Public Policy Favoring Settlement.

Third, entry of the Decree is also supported by the strong public policy favoring voluntary settlement of litigation. discussion supra at section IV.A, and cases cited therein; see also Weinberger v. Kendrick, 698 F.2d 61, 73 (2d Cir. 1982), reh'q granted in part, denied in part (2d Cir.), cert. denied sub nom. Lewy v. Weinberger, 464 U.S. 818 (1983) ("There are weighty justifications, such as the reduction of litigation and related expenses, for the general policy favoring the settlement of litigation.") (citations omitted). Hooker Chemicals, 776 F.2d at 411; United States v. Wood, Wire and Metal Lathers International <u>Union</u>, 471 F.2d 408, 416 (2d Cir. 1973), cert. denied sub nom. Wood. Wire and Metal Lathers Int'l Union v. United States, 412 U.S. 939 (1973). Both the parties and the public benefit from the "saving of time and money that results from the voluntary settlement of litigation. " Citizens for a Better Environment v. Gorsuch, 718 F.2d at 1126. "[The] clear policy in favor of encouraging settlements must also be taken into account . . . particularly in an area where voluntary compliance by the parties . . . will contribute significantly toward ultimate achievement

The resources of the governmental parties are limited. If forced to prosecute, they might well expend inordinate amounts of these resources on this single Landfill Site, to the detriment of other areas in other parts of the country." Hyde Park Landfill, 540 F. Supp. at 1079-80.

of statutory goals." Newspaper & Mail Deliverers' Union of New York, 514 F.2d at 771.

In addition, the settlement will "ease the strain on public enforcement resources and this court." Rohm and Haas, 721 F.

Supp. at 696; BASF, slip op. at 5. If the Decree is rejected, the parties will likely engage in expensive motions practice and discovery, as well as litigation of cross-claims and third party actions. This would result in years of litigation before the remedy is fully completed, and an adjudication of all claims and a complete repayment of the Superfund could be obtained.

4. The Decree Furthers Congress' Goal of Using Mixed Funding to Accomplish CERCLA Settlements

As outlined above, by enacting Section 122(b) in the 1986 amendments to CERCLA, Congress endorsed the use of settlements for less than 100 percent of the cost of cleanup in which the Superfund contributes a "mixed funding" share of the clean-up costs. Conference Report on Superfund Amendments and Reauthorization Act of 1986, 99 Cong., 2d Sess. Report 99-962 at 183 (1986). By expressly enacting a mixed funding provision, Congress

confirm[ed] the President's . . . authority to enter into 'mixed funding' agreements, whereby the funds contributed by potentially responsible parties are supplemented by Federal Superfund dollars. . . reflect[ing] the reality that the government will sometimes settle for less than full cleanup costs. . . and then seek to recover remaining costs from nonsettling parties.

Report, Impact of Superfund on Small Business, Committee on Small Business, 99th Cong., 1st Sess. 44-45 (1985). Congress determined that this approach is "fully consistent with joint and

several liability. The government is making a pragmatic assessment of whether settlement for less that 100% will expedite cleanup regardless of liability." Id.

Here, the proposed Decree implements fully Congress' intent underlying Section 122(b) of CERCLA. In this case, the United States made the "pragmatic assessment" that a mixed funding settlement would expedite completion of the interim remedy at the site.

In sum, the Decree is consistent with the public interest and furthers the goals of CERCLA. It results in the expeditious cleanup of a hazardous waste site, and obviates the need for litigation and saves the extensive time and resources that would be needed to litigate a case of this magnitude.

#### B. THE CONSENT DECREE IS REASONABLE

The proposed Decree ensures that the \$8.4 million interim remedy selected by EPA will be implemented in an expeditious manner, while compromising only a portion of the cost of the interim remedy and the government's past costs. This certainly is a "reasonable" settlement from the point of view of the government and the public.

Before Congress amended CERCLA in 1986, courts outlined a number of factors for evaluating EPA's remedy for a site in order to determine whether a CERCLA settlement is "reasonable." See, e.g., United States v. Conservation Chemical Co., 628 F. Supp.

391, 403 (W.D. Mo. 1985); <u>Seymour Recycling</u>, 554 F. Supp. at 1339.<sup>21</sup>

In applying these factors, however, the courts recognized their "limited duty" to inquire into the technical aspects of the Decree in order to ensure that the proposed settlement adequately addresses environmental and public health concerns. <u>Cannons</u>

<u>Engineering</u>, 720 F. Supp. at 1038; <u>Hooker Chemicals</u>, 540 F. Supp. at 1072.

The 1986 amendments to CERCLA further clarified the limited role of the court in assessing the reasonableness of a CERCLA decree. Specifically, Congress added two sections to CERCLA that clarify that selection of the remedy is an executive function and that judicial review of that function is limited to traditional "administrative record review" of an agency's decision. First, Section 121(a) of CERCLA specifies that EPA is to select the remedial action:

[EPA] shall select appropriate remedial actions . . . to be carried out under section 9604 or secured under section 9606 . .

42 U.S.C. § 9621(a).

Second, Section 113(j) provides that the standard for the Court's review of the remedial action selected by EPA is the administrative law standard of whether the decision is "arbitrary

The criteria included 1) the nature and extent of the hazards at the site; 2) the alternative approaches for remedying the hazards at the site; 3) the degree to which the remedy in the decree will adequately address the hazards at the site; 4) whether the decree furthers the goals of CERCLA; and 5) whether approval of the decree is in the public interest.

and capricious", based on the information contained in the agency's administrative record.

In considering objections raised in any judicial action under this Act, the court shall uphold [EPA's] decision in selecting the response action unless the objecting party can demonstrate, on the administrative record, that the decision was arbitrary and capricious or otherwise not in accordance with law.

42 U.S.C. §9613(j)(2).

Thus, in determining whether to enter this Decree, Congress has directed this Court not to substitute its judgment for that of EPA. Michigan v. Thomas, 805 F.2d 176, 182 (6th Cir. 1986); United States v. Northeastern Pharmaceutical and Chemical Company, 579 F. Supp. 823, 844-845 (W.D. Mo. 1984), aff'd in part and rev'd in part, 810 F.2d 726 (8th Cir. 1986), cert. denied, 484 U.S. 848 (1987); Acushnet, 712 F. Supp. at 1032. The settlement must "merely be reasonable when measured by the range of plausible interpretations of th[e] record." Rohm & Haas, 721 F. Supp. at 686. Moreover, the Court is to give great deference to EPA's interpretations of both the statute and EPA's own rules. Chevron, USA, Inc. v. National Resources Defense Council, 467 U.S. 837 (1984).

Here, in accordance with these standards, it is clear that the settlement is reasonable and adequately addresses the environmental hazards at the Site. As detailed above, EPA performed a remedial investigation at the Site and determined that hazardous substances were present at the Site. EPA then prepared a Feasibility Study evaluating various remedial alternatives. Next, after allowing for more than five weeks of

open public comment on the interim remedy preferred by EPA in its Proposed Plan, EPA, based on the administrative record developed for the Site, issued a Record of Decision which selected an interim remedy that addresses the soil contamination at the Site. In its evaluation, as detailed in the ROD, EPA gave extensive consideration to the various alternatives for remediating the site, evaluating each alternative carefully in light of the factors set forth in Section 121 of CERCLA.<sup>22</sup> The results of this analysis indicate that capping the landfill is the best available alternative for remediating the hazards posed by the soils at the site, with additional data to be collected to further evaluate what action should be taken to address the groundwater contamination. The Settling Defendants have agreed to implement EPA's selected interim remedy.

Nonetheless, a number of comments have been submitted during the public comment period on this Decree which question the basic choice of the remedy selected by EPA, as well as how the remedy will be implemented. The United States has carefully reviewed these comments and determined the comments do not form the basis for withdrawing its consent to this decree. The following discussion deals with the main comments submitted which relate to

The factors include (1) consistency with other environmental laws, (2) reduction of toxicity, mobility or volume, (3) short-term effectiveness, (4) long-term effectiveness, (5) implementability, (6) cost, (7) community acceptance, (8) state acceptance, and (9) overall protection of human health and the environment. See ROD at 9-15.

the adequacy of the remedy. Further responses relating to technical issues regarding the remedy are contained in Exhibit A.

1. Comments Objecting to the Selected Interim Remedy

The technical comments submitted on the proposed Decree by certain Citizens Groups, 23 and by individual residents generally criticize EPA's selected interim remedy. Without indicating what alternative would be preferable, they contend, <u>inter alia</u>, that 1) the clay cap is not sufficiently "protective of the environment" because it does not prevent or contain groundwater contamination, and 2) the cap is not "cost-effective" because it is not permanent and likely to fail. These contentions are without merit.

First, although the United States has responded to each of these comments here or in its response to comments, <u>see</u> Exhibit A, it is important to emphasize that EPA selected the interim remedy <u>after</u> providing a full and fair opportunity for public comment on its preferred alternative. Yet, as EPA's summary of comments on the proposed plan indicates, <u>see</u> Appendix 5 to the ROD, <u>none</u> of these commenters, nor the local community as a whole, showed much interest in the Site or provided comments to EPA. Section 117(a) of CERCLA expressly requires EPA to include the public in its remedy selection process, and EPA worked diligently to ensure that the public had every opportunity to

The comments from the "Citizens Groups," came primarily in a letter submitted by a Mr. Larry Davis, on behalf of USWA Local #6786, Healthy Environment for All Life, Hoosier Environmental Council, and PAHLS.

participate. These commenters, however, did not avail themselves of CERCLA's public participation process. Yet, if the system contemplated by CERCLA is to work efficiently, it is during the selection of the remedy when comments on the remedy should be submitted, not after the ROD issued and a settlement providing for implementation of the ROD is reached.

Second, the commenters concern that the cap will not prevent or contain groundwater contamination misses the fact that EPA has selected an <u>interim</u> remedy for the site. After reviewing the data collected during the RI, the alternatives outlined in the FS Report, and the public comments provided on the preferred alternative, EPA chose an interim remedy which addresses the surface soil contamination and on-site wastes by capping the site. As detailed in the ROD, the purpose of the cap is to promote rain runoff, thereby reducing infiltration, and to prevent direct contact with contaminated soils. EPA further concluded that by minimizing infiltration, the cap will help reduce groundwater contamination by minimizing the leaching of contaminants into the groundwater.

However, the proposed Decree does not determine what remediation of the groundwater and surface water may be required. Rather, as directed by the ROD, since the extent of groundwater and surface water contamination and the effect of the cap on that contamination could not be determined fully without further investigation, under the proposed Decree the settling defendants will collect new groundwater monitoring data at the Site. Should

the additional data indicate that further remedial action should be taken, a remedy addressing the groundwater and/or surface water will be developed in accordance with the requirements of CERCLA and the NCP, including all community relations and public participation requirements.

Third, in the FS and the ROD, EPA specifically evaluated the long-term effectiveness, as well as the cost-effectiveness, of the selected remedy. The FS considered a number of alternatives and concluded that more permanent alternatives involving treatment of the soils, such as incineration, were prohibitively expensive and impracticable when compared with the selected interim remedy. See Section VI(B) of the ROD.<sup>24</sup> In addition, under the NCP, containment technologies, such as the cap in this case, are generally considered appropriate for wastes, such as those here, that pose a relatively low long-term threat to human health and the environment. See Section 300.430(a)(1)(iii)(B) of the NCP, 40 C.F.R. §300.430(a)(1)(iii)(B).

Finally, the ROD and the proposed Decree make clear that the settlors must perform long-term operation and maintenance to ensure the integrity of the cap. Moreover, because hazardous substances will remain on-site, U.S. EPA must conduct periodic reviews of the effectiveness of the interim remedy. See Section 121(c) of CERCLA, 42 U.S.C. §9621(c). Thus, in addition to the review of the additional data collected under this Decree, these

On-site incineration, for example, would require at least 25 years to incinerate the 1.1 million cubic yards of waste at the Site and would cost over \$400 million.

periodic reviews will assess whether the interim remedy is protective of human health and the environment and determine whether any further action is necessary. Indeed, since this is an interim remedy, the long-term effectiveness and permanence of the interim remedy will best be evaluated when the groundwater issue is resolved.

#### 2. Comments Regarding the Remedial Action Plan

The Citizens Groups also claim that the Remedial Action Plan ("RAP"), Appendix B to the Decree, is inconsistent with the ROD.

They apparently believe that the Decree embodies significant changes from the ROD which would require EPA to issue a notice explaining those changes.

The legal framework which the commenters are referring to is outlined in the public participation provisions of CERCLA and its regulations. Under Section 117(c) of CERCLA, if, after EPA adopts a remedy, it enters into a consent decree to perform the remedy, and the decree differs "in any significant respects" from the selected remedy "the President ... shall publish an explanation of the significant differences and the reasons such changes were made." 42 U.S.C. §9617(c). The NCP further provides that EPA need only publish an "explanation of significant differences" when the "Consent Decree entered into differs significantly from the remedy selected in the ROD with respect to scope, performance or cost . . " 40 C.F.R. §300.435(c)(2). A notice of an explanation of significant

differences does not, however, require an additional public comment period.

Here, EPA has not made significant changes to the "scope, performance or cost" of the remedy, which warrant an explanation of significant differences. As detailed in the United States' Response to Comments, the RAP is fully consistent with the ROD.

See Exh. A at 10-20. In their comments, however, the Citizens Groups particularly focus on the additional studies discussed in EPA's Record of Decision, and thus plaintiff will address that issue here as well. 25

The additional studies are outlined in the ROD, to include, "as necessary," ROD at 1, "fish bioassay work" and "general toxicity tests on the river." ROD at 17. The Citizens Groups claim the RAP imposes certain "preconditions" on the performance of these studies which were not in the ROD, and that this is a significant difference.

First, contrary to the Citizens Groups' assertions, the Decree does not reflect a significant difference from the ROD. Here, the proposed Decree clearly requires the defendants to perform studies in accordance with the ROD and the RAP, see Section VII.D.7, and the RAP makes provisions for the performance of a biological survey and additional water quality studies. See Section 5 of the RAP. The RAP also provides that these studies

A field office of the Fish & Wildlife Service of the Department of Interior ("DOI") originally submitted a comment related to this issue, but DOI subsequently withdrew its comments. Nonetheless, the substance of the comments are addressed here.

would be conducted after the settling defendants conduct a water quality analysis by collecting additional monitoring data and EPA evaluates this data to determine if the groundwater, surface waters and/or the river sediment satisfy federal and state standards. See RAP at section 5. If these waters do not meet the standards, the studies will be done. However, the central purpose of these additional studies, as discussed in the ROD, is to provide information that EPA may use in deciding what further remedial action may be needed to remedy the groundwater and/or surface waters located at the Site. E.g. ROD at 14. Including additional monitoring prior to going forward with the studies is entirely consistent with that purpose and does not reflect a significant change.

In addition, the RAP provides that one type of biological study, a bioaccumulation study, would evaluate only those parameters that have been found at the site and have the potential to bioaccumulate. See RAP at section 4.5, Fig. 4-5. The ROD, however, does not prohibit such requirements, and in fact states that indicator parameters would "be selected from" a range of constituents. ROD at 17. The RAP merely further refines this. Moreover, without these requirements, there would be no basis for determining whether any contamination found by the study is from the Site, which, as noted above, is the focus of any additional studies. This surely does not represent a significant change from the ROD which does not prohibit such reasonable, and minor, technical elaborations.

Second, even assuming, arguendo, the Decree does include a significant difference from the remedy selected by the ROD, the Court still should enter proposed Decree. The Decree is not unreasonable because EPA formally failed to explain a difference. Rather, as outlined above, under the NCP, an explanation of significant differences does not trigger an additional public comment period. At most, EPA would have been required to publish an explanation. Here, the Citizens Groups have raised in considerable detail their concerns about the alleged differences between the ROD and the RAP, and the Justice Department and U.S. EPA have responded to those concerns. Thus, in effect, the public comment period on this Decree has served as an opportunity for the public to be heard on the alleged differences.

Finally, in any case, as a practical matter, the Citizens Groups' concerns are misplaced because, at this point, EPA has not made a determination that additional studies are unnecessary. Rather, EPA has provided that additional monitoring should be performed first, to further analyze the surface water, groundwater, and sediments, before the settling defendants perform the additional studies. Only if EPA decides the studies are unnecessary, would EPA need to decide whether to issue an explanation of significant differences.

3. Objections to Commencing the Remedial Action Prior to Entry of the Decree

The Citizens Groups also have objected to the fact that field activities have begun at the site even though the final RD/RA workplan has not yet been approved. They also contend that

the State of Indiana did not formally approve of the commencement of field activities prior to the entry of the Consent Decree.

Under Section 122(e)(6) of CERCLA, 42 U.S.C. §9622(e)(6), PRPs may undertake remedial action at a facility, even prior to the entry of a Consent Decree, with the approval of U.S. EPA. In addition, Section VII(D)(6) of the Decree provides that the parties to the Decree may agree that the PRPs may commence field activities before approval of the final RD/RA workplan.

In this case, in furtherance of the public interest in correcting the environmental problems at the site as quickly as possible, U.S. EPA authorized the PRPs to commence remedial design and remedial action before entry of the proposed Decree and finalization of the Workplan. The work is proceeding in accordance with the ROD, the Remedial Action Plan and the draft Workplan. This is being done at the PRPs' risk, since the Decree had not been entered and they have not received the Superfund's mixed funding share.

Moreover, the State did not object to beginning remedial design and work before entry of the proposed Decree and before U.S. EPA approves a final RD/RA Workplan. In fact, the State has been extremely involved in the design and implementation of the remedy, has regularly attended construction meetings, and continues to consult regularly with U.S. EPA regarding the design and implementation of the remedy.

#### C. THE DECREE IS FAIR

 The Parties Negotiated the Decree In Good Faith and the Decree Reflects a Compromise Based Upon <u>Litigation Risks</u>

In determining whether a CERCLA settlement is fair, courts have examined whether the parties negotiated in good faith and whether the settlement reflects a compromise based upon litigation risks. E.g., Cannons Engineering, 899 F.2d at 86; United States v. McGraw Edison Co., 718 F. Supp. 154, 158 (W.D.N.Y. 1989); United States v. Hooker Chemicals & Plastics Corp., 607 F. Supp. 1052, 1057 (W.D.N.Y. 1985), aff'd, 776 F.2d 410 (2d Cir. 1985). 26

In this case, the commenters did not question, nor could they, the parties' good faith in negotiating the proposed Decree. The United States and the State have interests adverse to those of the settlors, thus assuring that the settlement results from good faith arms-length negotiations.

Moreover, both the governments and the settling defendants faced significant litigation risks prior to reaching settlement. Courts have uniformly held that liability under CERCLA is joint and several if the harm is indivisible. Thus, each of the defendants might have been held individually responsible for the entire cleanup and all of the government's response costs. On

<sup>&</sup>quot;Among the factors to be considered by the reviewing court are the strengths of the plaintiff's case, the good faith efforts of negotiation, the opinions of counsel, and the possible risks involved in litigation if the settlement is not approved." Hooker Chemicals 607 F. Supp. at 1057.

See note 6, supra.

the other hand, the United States faced the substantial burden of establishing each of the elements of liability against even one defendant. Proving liability would be particularly complicated in this matter due to the scarcity of site-records or other primary source materials documenting the volume and/or nature of waste disposed of at the Site. Moreover, the information requests sent to PRPs by EPA under Section 104(e) of CERCLA, provide little liability information. The United States would also have to secure the injunction against parties with the means to perform the remedy and reimburse EPA's past costs. The settlement is a compromise reflecting the balancing of those respective litigation risks.<sup>28</sup>

#### 2. The Consent Decree Is Fair To Non-Settlors

When evaluating the fairness of a CERCLA decree, the potential impact of a CERCLA settlement on non-settling parties is not determinative. Indeed, to the contrary, an "evaluation of the Proposed Decree which overemphasizes the importance of its potential effect on the non-settlors . . . would frustrate the statute's goal of promoting expeditious resolution of harmful environmental conditions." Acushnet, 712 F. Supp. at 1029 (despite the contribution protection afforded settlors under

Both the United States and the Defendants made compromises and received benefits. The Defendants have agreed to implement the interim remedy selected by EPA and to reimburse EPA for all oversight costs. The Defendants have also assumed most of the risk of cost overruns which are possible in any complex CERCLA remedy. In return, the United States has agreed to pay a portion of the cost of the remedy and compromise its past costs.

Section 113(f)(2), a CERCLA settlement's effect on non-settlors is not determinative, but "is merely one factor in the calculus"); see also Cannons Engineering, 899 F.2d at 87; New York v. Exxon., 697 F. Supp. at 694 (if "non-settling parties are disadvantaged in any concrete way by the applicability of section 113(f)(2) to the overall settlement, their dispute is with Congress.") (emphasis added).

A number of comments have been submitted which relate to the fairness of the settlement. The United States has evaluated these comments and determined that the comments do not form a basis for withdrawing its consent to the Decree.

#### a. <u>Committee's Comments</u>

The Committee for Marion-Bragg Landfill <u>De Minimis</u> Buyout ("Committee"), composed of 7 entities that are not signatories to the Decree, has submitted comments which assert that the Decree is "unfair," and somehow violates "due process."

#### (1) <u>Committee's Comments Related to</u> <u>Substantive Fairness</u>

The Committee asserts that the amount which the United States has compromised in this action "seems likely to assign" to committee members liability for response costs which exceeds their "fair share" of the costs of remediating the Site. Thus, they claim that since the settlement must be "equitable," and since EPA has not developed a ranking which equitably apportions responsibility among settlors and non-settlors, the Justice Department should withdraw its consent to this settlement, or

alternatively, this Court should refuse to enter the Decree until such apportionment is established.<sup>29</sup>

However, contrary to the Committee's contention, CERCLA does not require the United States, or this Court, to perform the equitable allocation of responsibility demanded by the Committee in order to determine whether a settlement between the government and settling PRPs is fair. 30 CERCLA imposes joint and several liability. Thus, if the United States were to litigate its claims, it need not perform (or prove) an equitable apportionment of responsibility. It would only serve to discourage settlement if the government were required to make a higher showing of proof to support a settlement than to litigate its claims. 31 As a result, Congress authorized courts to use equitable factors to allocate response costs "in resolving contribution claims" and not in resolving claims of the United States, by settlement or otherwise. 42 U.S.C. §9613(f)(1) (emphasis added); see United States v. R. W. Meyer, Inc., 889 F.2d 1497, 1507-08 (C.A. Mich, 1989); O'Neil v. Picillo, 883 F.2d 176 at 179. Otherwise, courts would, in effect, be put in the position of having to resolve the

See Committee's Comments at 1-3.

The Committee's citation to Section 122(e)(3)(A) of CERCLA, 42 U.S.C. § 9622(e)(3)(A), is deceiving. It does not require EPA to perform even a nonbinding preliminary allocation of responsibility. It authorizes the development of guidelines which EPA "may" use if it chooses.

E.g. Acushnet, 712 F. Supp. at 1027 (the government might never settle with PRPs if recovery from recalcitrant were limited to their equitable share, because the government can recover from any and all defendants under strict joint and several liability in the first instance).

complex questions of allocation posed by a contribution action among PRPs in the context of every settlement between the United States and a settling PRP.<sup>32</sup> Thus, in determining whether a decree is fair, this Court's

task is <u>not</u> to make a finding of fact as to whether the settlement figure is exactly proportionate to the share of liability appropriately attributed to the settling parties; rather, it is to determine whether the settlement represents a reasonable compromise, all the while bearing in mind the law's generally favorable disposition toward the voluntary settlement of litigation and CERCLA's specific preference for such resolutions.

#### Rohm & Haas, supra, at 680-81.

We need not determine if the settlement precisely reflects what we feel to be the settlors' most likely volumetric share of the waste dumped at [the Site]. Such a finding would be akin to that made at trial and would involve no savings in terms of judicial or enforcement resources. If a settlement were required to meet some judicially imposed platonic ideal, then, of course, the settlement would constitute not a compromise by the parties but judicial fiat. Respect for the litigants, especially the United States, requires the court to play a much more constrained role.

Although the statute allows a court to apply the equitable factors the court deems appropriate, relevant factors could include: the amount of hazardous substances involved; the degree of toxicity or hazard of the materials involved; the degree of involvement by parties in the generation, transportation, treatment, storage, or disposal of the substances; the degree of care exercised by the parties with respect to the substances involved; and the degree of cooperation of the parties with government officials to prevent any harm to public health or the environment. 131 Cong. Rec. 34646 (Dec. 5, 1985). The addition of significant time and complexity from these multiple factors is inevitable.

Id. at 685 (emphasis added); 33 see United States v. Bell
Petroleum Services. Inc., 718 F. Supp. 588 (W.D. Tex. 1989);
Acushnet, supra, at 1032; Cannons Engineering, 720 F. Supp. at 1046.

In addition, the question of what impact this settlement may have on members of the Committee in subsequent litigation is not ripe for decision at this time. The actual amount that any individual non-settlor should contribute to this interim remedy is not determined by this Decree. Rather, that would be determined in any future actions by the settling defendants for contribution and by the United States for cost recovery in which the non-settlors could seek to raise their concern that they would then be paying more than their equitable share. fairness of this settlement, however, should not be based on speculation that at some future date, certain persons who did not participate in this settlement may be found jointly and severally liable for the remaining response costs and may pay more than their equitable share of the remedy. Given the speculative nature of such liability, a requirement of a precise allocation of responsibility among all PRPs is premature. E.q. United States v. Acton Corp., 733 F. Supp. 869, 873 (D.N.J. 1990). As the Acton Court stated, the non-settlors

concerns over potential liability are speculative. [They] anticipate that, if the decree is entered,

The court in Rohm & Haas also refused to review the available documentation to determine whether the non-settlors' view of the evidence on allocation was more plausible than that of the United States. 721 F. Supp. at 687.

they will be forced to pay a disproportionate share; at this time, however, there is no finding of liability against them. Assuming that the United States and the settling defendants seek recovery from the [non-settlors], the amount of that recovery will be determined by judicial proceedings. Such proceedings will provide [them] with any procedural and substantive protections to which they are entitled as a matter of law.

Acton, 733 F. Supp. at 873; see also United States v. Alcan
Aluminum Corp., No. 3-89-1657, slip op. at 5 (M.D. Pa. May 22,
1990) (premature for non-settlors to appeal entry of decree
absent a liability finding against non-settlors) (Exhibit C).

Further, Congress clearly expected that the threat of joint and several liability would induce PRPs to come forward early, settle and conduct expeditious cleanups. See, e.g., 132 Cong. Rec. S14903 (daily ed. Oct. 3, 1986) (Statement of Rep. Stafford). PRPs would not agree to come forward and settle if non-settling PRPs could easily undermine the power of joint and several liability, as well as the advantages of settling early with the United States, by insisting that a settlement "allocation" was unfair and that a Decree should not be entered unless liability is equitably apportioned.

In sum, in determining whether to approve the Consent Decree, this Court need not, and indeed should not, engage in the type of detailed analysis required for determining precise share allocations among settlors. Rather, the United States respectfully submits that this Decree for the interim remedy at the Site is a fair settlement and a reasonable compromise. It advances the public interest in an expeditious cleanup and

preservation of the Superfund. Under the Decree, the settling defendants will contribute 79% of the cost of implementing the interim remedy, including the long term cost of maintaining the cap. This represents approximately 69% of the total response costs (including past costs) to date. Surely, in light of the costs and risks of any litigation and the fact that it has ensured expeditious implementation of EPA's selected remedy, this settlement is a fair settlement. In evaluating its fairness, the Court should give considerable deference to EPA, the agency designated by Congress to enforce the environmental laws, and its decision to enter into a settlement.

## (2) Response to Committee's Comments Related to Due Process

The Committee also claims that entry of the Decree violates "due process" because some members of the Committee allegedly did not have notice of the Decree until September 1, 1990, and some were not contacted by EPA or the settling defendants and given the opportunity to participate in the settlement. 34

Yet, contrary to the Committee's assertion, each entity had ample opportunity to learn of the remedy for the site and the decree negotiations. First, CERCLA, and regulations promulgated pursuant to CERCLA, provide for public participation throughout the Superfund process to ensure public awareness of a proposed remedial plan, as well as proposed consent decrees. Here, EPA has complied fully with those obligations. Before EPA selected

<sup>34</sup> See Committee's Comments at 4-5.

the interim remedy and issued its ROD for this site, it published a public notice of the RI and FS Reports and its proposed plan and held a public meeting regarding the site in accordance with the public participation requirements of CERCLA. Moreover, after the decree was lodged, both EPA and the Justice Department made the decree available for public review.

Second, EPA took steps to collect information from and notify those entities directly that it determined may be connected with the site. As a result, Atlas Foundry, Anchor Glass Container, Bowman Construction, General Plastics, and Marion Paving, five out of the seven on the Committee, received information requests from EPA regarding this site as early as 1985 and 1986.<sup>35</sup> In addition to requesting information, the request also generally alerted them that EPA may consider them to be PRPs for the site.

Further, in August 1987, U.S. EPA sent four of the seven a notice letter under Section 122(e) of CERCLA which informed each of them that EPA had information that they may be a PRP for this site and offered them an opportunity to participate in the settlement negotiations.<sup>36</sup> At no time did EPA prevent any member of the Committee, or any other entity, from contacting the

<sup>35</sup> Pursuant to Section 104(e) of CERCLA, 42 U.S.C.
§ 9604(e), EPA sent information requests to Atlas Foundry,
10/26/85; Anchor Glass Container, 1/14/86; Bowman Construction,
2/6/86; General Plastics, 2/7/86; Marion Paving, 2/7/86.

On August 8, 1987, EPA sent notice letters to Atlas Foundry, Anchor Glass Container, General Plastics, and Marion Paving.

agency and asking to participate in the consent decree negotiations. Indeed, to the contrary, Anchor Glass Container participated in the settlement discussions, but chose not to join the settlement.

Moreover, the fact that EPA may not have notified each possible PRP directly is not a basis for delaying entry of the Decree. Otherwise, every Decree could be held hostage by a non-participant who questions why EPA did not to send it a notice letter. A court would have to engage in a mini-trial to assess whether EPA should have had enough evidence to consider a party to be a PRP and send a letter. Further, in most cases (as in this case), the records from a site are far from complete and thus the liability evidence is developed before, during, as well as after negotiations.

Finally, and perhaps more fundamentally, underlying the Committee's claim is the notion that they were somehow denied their "right" to participate in this settlement. However, as Congress made quite clear, there is no such "right." Under Section 122(a) of CERCLA, "[t]he President, in his discretion, may enter into an agreement with any person . . . " Moreover, such a decision "to use or not to use the procedures in this section is not subject to judicial review." Id.; see Rohm & Haas, 721 F. Supp. at 698 (no authority permits a court to compel any litigant, much less the United States, to settle a lawsuit with a particular defendant); see Cannons Engineering, 720 F. Supp. at 1040 ("not allowing de minimis PRPs to join the Major

PRP Consent Decree is within EPA's discretion and is not unfair.").

### b. Response to Residents' Comment Related to Fairness of Decree

A number of local residents, have claimed that the it is unfair that Waste Management, Inc., a PRP for the site, is not participating in the Decree, but is being paid to perform cleanup work, while local communities, such as the Town of Fairmount, are now being pursued for the cleanup.

The United States did not, nor could it, compel Waste
Management or any other person to enter into the proposed Decree.
Of course, if this settlement is approved, since the United
States would not recover all of its costs, the United States may
choose to pursue Waste Management, as well as any other nonsettling PRP for such costs, including the Superfund's mixed
funding share, in future cost recovery actions. However, to
date, the United States has not determined what PRPs it may
choose to pursue.

Moreover, the fact that the settling defendants chose ENRAC, a division of a subsidiary of Waste Management, as its contractor does not render this Decree unfair. ENRAC's connection with Central Waste Systems, Inc., a non-settling PRP that is a division of a subsidiary of Waste Management is as follows:

Central Waste Systems, Inc., is a division of Indiana Waste Systems, Inc., which, in turn, is a subsidiary of Waste Management. Waste Management owns approximately seventy-eight percent of the stock of Chemical Waste Management, Inc. One of

the divisions of Chemical Waste Management, is ENRAC. After a competitive bidding process, the settling defendants chose ENRAC as a contractor for the interim remedy at the site. Since Central Waste Systems and ENRAC are separate divisions of separate subsidiaries of Waste Management, U.S. EPA determined that the possibility of a conflict of interest was insufficient to prohibit the PRPs from utilizing ENRAC, their chosen contractor. This surely does not render the settlement unfair.

#### c. <u>Contribution Protection</u>

The Citizens Groups also claim that the contribution provision in Section XIX(G) of the proposed Decree exceeds the authority of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2). However, under Section XIX(G), which references Section 113(f)(2) of CERCLA, contribution protection extends only to claims "for contribution" regarding matters covered by the Decree.

Protection does not extend to non-contribution claims relating to matters covered in the Consent Decree. Thus, this provision complies fully with Section 113(f)(2) of CERCLA, which states that "[a] person who has resolved its liability to the United States or a State in an administrative or judicially approved settlement shall not be liable for claims for contribution regarding matters addressed in the settlement."

#### VI. CONCLUSION

For all the foregoing reasons, the United States respectfully submits that the Decree is fair, reasonable and consistent with the goals of CERCLA and, therefore, requests that the Decree be approved and entered as a final judgment.

Respectfully submitted,

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EXHIBIT A

# UNITED STATES DEPARTMENT OF JUSTICE RESPONSE TO COMMENTS ON THE PROPOSED CONSENT DECREE UNITED STATES V. YOUNT, ET AL., F 90-00142

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#### I. RESPONSES TO TECHNICAL COMMENTS

The following persons or entities have submitted comments on the Decree which relate to U.S. EPA's remedy and other technical issues:

- Healthy Environment for All Life, Hoosier Environmental Council, and PAHLS (collectively "Citizens Groups")
- Residents from the local community ("Residents")
- Natural Resources Defense Council ("NRDC")

These responses will address these technical comments. The primary technical comments are also addressed in the text of the motion to enter. Comments which relate to a variety of legal issues are only addressed in the text of the motion to enter.

#### A. Residents' Comments

<u>Comment</u>: The clay cap is not sufficiently protective of the environment because it does not prevent or contain groundwater contamination.

Response: The proposed Decree, in accordance with the ROD for the site, implements an interim remedy at the site.

Under the Decree, the settling PRPs have agreed to construct a low permeability cap and cover over designated areas at the site, and to perform further monitoring to determine if the surface water and groundwater require remediation.

U.S. EPA concluded in the ROD that installing a cap at the site will help reduce groundwater contamination by minimizing the leaching of contaminants into the groundwater. However, should monitoring results identify contamination which indicates that

remediation of groundwater and surface water may be required,

U.S. EPA will address groundwater contamination in accordance

with the requirements of CERCLA, including all applicable public participation provisions.

#### B. NRDC's Comments

1. <u>Comment</u>: The Natural Resources Defense Council ("NRDC") requested confirmation that the actions described in the proposed Decree represent only an interim remedy for the site, and that any decision as to a final remedy will be made pursuant to the public participation requirements of CERCLA.

Response: The remedy selected for this site and encompassed by the proposed Decree is an interim remedial action. As the ROD explains, this site has three media of concern: surface soils and on-site wastes, groundwater, and the on-site pond. The proposed Decree addresses the surface soil contamination and on-site wastes by capping the site. The purpose of the cap is to promote rain runoff, thereby reducing infiltration and prevent direct contact with contaminated surface soils and surface wastes.

The determination of what remediation will be done, if any, of the groundwater and the surface water is not covered by the proposed Decree. Rather, as directed by the ROD, since the extent of groundwater and surface water contamination and the effect of the cap on that contamination could not be determined fully without further monitoring, the proposed Decree provides for further monitoring and studies at the site. Should

monitoring of the groundwater and surface water reveal that additional remedial work may be needed, a remedy addressing the groundwater and/or surface water will be developed in accordance with the requirements of CERCLA and the National Contingency Plan (NCP), including all community relations and public participation requirements.

2. <u>Comment</u>: The proposed Decree does not require compliance with the National Pollutant Discharge Elimination System ("NPDES") permitting requirements of the Clean Water Act, 33 U.S.C. §1311, <u>et seq.</u>, and a final remedy must comply with NPDES requirements.

Response: First, CERCLA does not require an NPDES permit for any migration of groundwater to the River. Under Section 121(e)(1) of CERCLA, 42 U.S.C. §9621(e)(1), Federal, State and local permits are not required for remedial actions conducted entirely on-site, such as in this case.

Second, the Clean Water Act does not require an NPDES permit for this site. The NPDES program requires permits only for the discharge of pollutants from a "point source", 40 C.F.R. § 122.1(b). The chronic migration of water from an aquifer to a nearby river over a one-half mile stretch of river bank is not a point source discharge under 40 C.F.R. §122.2.

Third, in any case, the interim remedy does not address the groundwater and surface waters on the site. Thus, NRDC's comment is premature. Should monitoring reveal that remediation of these

media may be required, any applicable or relevant and appropriate requirements ("ARARs") will be identified in connection with the proposal and selection of any subsequent remedy.

#### C. Citizens Groups' Comments

1. <u>Comment</u>: The Remedial Design/Remedial Action (RD/RA) Workplan, and the documents required under the RD/RA Workplan (such as the sampling and analysis plan and health and safety plan), are not available for public review and comment. Thus, since the Workplan and the documents required under it provide the details of the remedy, they cannot adequately comment on the proposed Decree.

Response: First, notwithstanding the fact that the RD/RA Workplan has not been made public yet, the Citizens Groups, who prepared extensive comments on the proposed Decree, have had access to considerable information regarding the details of the remedy. The RI/FS Reports, the ROD, the proposed Decree, and the Remedial Action Plan attached to the proposed Decree all provide substantial details about the site and the interim remedy for the site. Moreover, the effectiveness and protectiveness of the interim remedy will be determined by how well the remedy is implemented, not by the details in the Workplan and its associated documents.

Second, the fact that the final RD/RA Workplan is not available prior to entry of this decree is not unusual. CERCLA and its regulations provide for public participation before U.S.

EPA issues a ROD and after a consent decree has been lodged. In most cases, however, the RD/RA Workplan is not finalized until after a court enters the consent decree. Typically, after a decree has been entered, the parties performing the cleanup submit the RD/RA Workplan to U.S. EPA for its review and approval. Thus, the public does not review the Workplan or any of the documents required under the Workplan (such as the sampling and analysis plan or the health and safety plan) prior to commenting on the Consent Decree.

In this case, Section VII(D) of the proposed Decree provides that the Workplan will be finalized after entry of the Decree.

Once the Workplan is finalized, it will be annexed to the Decree in accordance with Section VII(D)(1), and U.S. EPA will place a copy of the Workplan in the local information repository. The public may then review the Workplan.

2. <u>Comment:</u> The integrity of the Facility is questionable as additional landfill material was unearthed along the River bank, requiring modifications to the remedial work of which the public has not yet been informed.

Response: In the spring of 1990, as a result of severe weather conditions, a few trees near the River bank fell, unearthing landfill material. In response, and in accordance with the ROD and Remedial Action Plan, U.S. EPA is considering

installing protection for part of the bank to minimize the chances of landfill materials entering the river. Such minor supplemental measures are often taken during the course of remedial action and are not significant alterations of the interim remedy selected in the ROD.

3. <u>Comment</u>: The remedy selected in the ROD fails to prevent groundwater contamination or its migration off-site.

Response: As noted above, the proposed Decree does not address the contamination in the groundwater at the site, except to require groundwater monitoring. Based on the further monitoring, U.S. EPA will determine, if the surface water and groundwater require remediation. The capping of the site should reduce groundwater contamination by minimizing the leaching of contaminants into the groundwater. However, if monitoring results indicate that remediation of groundwater and surface water are required, U.S. EPA will proceed, in accordance with CERCLA and the NCP, with appropriate measures at that time.

<sup>4. &</sup>lt;u>Comment:</u> The City of Marion was "coerced" into accepting the costs of operation and maintenance of the landfill. Moreover, these costs are potentially open ended, and information related to the city's potential liability has not been made available to the public.

Response: The City of Marion decided to take responsibility for the cost of operation and maintenance of the remedy, instead of contributing to the substantial cost of designing and constructing the various elements of the remedy. The City made this choice during the course of negotiations. Presumably, in analyzing the risks associated with being a PRP at the site, the City decided that the terms of the proposed Decree were advantageous. U.S. EPA did not coerce the City or any other PRP into agreeing to the terms of the settlement embodied in the proposed Decree. Indeed, to the contrary, several PRPs which were involved in the negotiations ultimately decided not to participate in the settlement. Finally, the estimated costs for operation and maintenance of the interim remedy has been made public. It is contained in the FS Report.

5. <u>Comment</u>: U.S. EPA has failed to respond to comments from the State regarding various documents, including the Draft Quality Assurance Project Plan, the Draft Sampling and Analysis Plan, the Draft Groundwater Monitoring Plan and the Draft Remedial Design/Remedial Action Work Plan.

Response: U.S. EPA has worked closely with the State in developing the remedial design and implementing the interim remedy for this site. U.S. EPA has carefully reviewed and considered all comments received from the State and provided the State with copies of U.S. EPA's comments on draft documents

received from the settling PRPs. Moreover, particularly where U.S. EPA has disagreed with the State's views, U.S. EPA has provided a written response to the State's comments explaining any differences of position. In addition, the State has regularly attended the meetings with the settling PRPs regarding implementation of the remedy.

6. <u>Comment</u>: U.S. EPA has not issued a notice of significant changes, although such changes have been made, such as noncompliance with applicable or relevant and appropriate requirements ("ARARS"), including the environmental regulations of the State of Indiana.

Response: It is difficult to address this comment because it is not entirely clear from the comments what specific changes the commenter alleges have been made which are allegedly "significant changes." However, U.S. EPA has made no changes to the terms of the proposed Decree since it was signed. Nor have "significant changes" been made to the interim remedy selected in the ROD during design and implementation of the remedy.

Under Section 300.435(c)(2) of the National Contingency
Plan, U.S. EPA need only issue an explanation of significant
differences where, after the adoption of the ROD, the remedial or
enforcement action taken, or the settlement or Consent Decree
entered into, differs significantly from the remedy selected in
the ROD with respect to scope, performance or cost. See 40

C.F.R. § 300.435(c)(2). Here, U.S. EPA has not altered the remedy significantly since the issuance of the ROD (see e.g., Response to Comment C.3, supra), and the RAP is fully consistent with the goals and directives of the ROD (see Response to Comment C.8, infra). Moreover, U.S. EPA has certainly complied with all ARARs, including all State regulations, in selecting and implementing the remedy for this site. The ARARs for this interim remedy are set forth in the ROD, and Section VII(C) of the Consent Decree requires the settling PRPs to comply with all ARARs during remedial design and remedial action at the site.

- 7. <u>Comment</u>: The Remedial Action Plan ("RAP"), attached to the Decree as Appendix B, is not consistent with the ROD and/or the Decree in the following respects:
  - a. <u>Comment</u>: The RAP provides that monitoring will "show" the effectiveness of the remedy, while the ROD provides that monitoring will "determine" the remedy's effectiveness. Thus, the RAP is predisposed to find no environmental or human health impacts.

Response: In this context, both words mean essentially the same thing. Under both the ROD and the RAP, U.S. EPA's objective is to analyze the data obtained from monitoring in order to determine whether or not additional remedial action will be needed at the site to address the groundwater and surface waters. By using the term "show" rather than "determine", the RAP

does not alter this objective nor does it predetermine monitoring results.

b. <u>Comment</u>: The RAP does not comport with the ROD with regard to the manner in which leachate seeps and uncovered hazardous materials are addressed during the interim remedy.

Response: There is essentially no difference in the way that the RAP and the ROD address leachate seeps and drums or other hazardous wastes. First, both provide that contaminated leachate seeps and sediments will be removed and/or covered by the cap. The ROD provides that, if leachate seeps are not eliminated, seep collection will be required. Under the RAP and the proposed Decree, if the leachate seeps are not contained, additional work regarding the seeps will be required under Section IX of the Decree.

Second, the ROD provides that during the course of regrading any drums or other hazardous wastes, if present, would be removed according to RCRA. Here, under the RAP, if drums containing liquids are found, the drums must be set aside and sampled. If the liquid is hazardous, it will dealt with as hazardous waste under RCRA. EPA recognizes that such liquid hazardous wastes (in containers that may eventually leak) may

pose a threat to the groundwater at the site. If the liquid is not hazardous, it still will be taken offsite, but as a non-hazardous waste. Any solid waste, after years of exposure near the surface, is more than likely to be fairly insoluble in water and therefore does not present a viable threat to the groundwater. As a result, such waste will be covered in the course of regrading. Moreover, as outlined above, if the groundwater contamination requires remediation, a final groundwater remedy will be selected.

In any case, it is important to note that since the settling defendants brought in fill and less excavation was done, during the installation of the cap, only one drum which contained liquid waste was uncovered and characterized.

c. <u>Comment</u>: The RAP incorrectly reported that the RI and the ROD concluded that there is no potential for contamination of upgradient private-use wells and that the impacts of contaminants from the upper aquifer on the River are minimal.

Response: The RAP does not state that the RI and ROD reached this conclusion. The RAP states that there is little, if any, potential for contamination of private-use wells which are upgradient from the

groundwater and surface water at the site, and presents support for this statement.

Second, the RAP does not state that the ROD concludes the impacts on the River are minimal. However, both the RI and ROD provide information that would support such a conclusion. Section 5.3.2.2 of the RI states that exposure pathways associated with the river are considered to be negligible, leading to the conclusion that the effects on the river are minimal. Moreover, Section II(D)(4)(b) of the ROD states that the RI/FS concludes there is no currently identified risk to the River, although the potential for such risk exists.

d. <u>Comment</u>: New monitoring wells have been installed at the site and the old monitoring wells have been abandoned. Therefore, it is not possible to compare the results obtained during the RI with the results that will be obtained in the future.

Response: Both the FS and the ROD, recommended the installation of new monitoring wells. The purpose of the monitoring wells is to determine whether further action is required to remedy groundwater contamination at the site. To make this determination, U.S. EPA will not compare results from

will analyze the results of groundwater monitoring that is done after the cap has been installed and then determine whether further action is necessary.

e. <u>Comment</u>: The results of sampling performed in February of 1990 have not been made available to the public yet.

Response: U.S. EPA received these results after the close of the public comment period. It will make them available to the public shortly.

f. <u>Comment</u>: The Consent Decree calls for thirty years of monitoring of the cap, while the RAP only calls for five years of groundwater sampling.

Response: Paragraph VII(D)(7)(a)(ii) of the proposed Decree states that "[m]onitoring shall continue for a period of at least thirty years after the construction of the cap is complete, unless it can be demonstrated to the U.S. EPA's satisfaction that further monitoring is not necessary." This monitoring, which covers sampling of groundwater and surface

waters, shall be done. The fact that Figure 4-3 of the RAP only shows sampling through five years does not mean that sampling will cease at that time. Rather, sampling will continue until U.S. EPA is satisfied that further monitoring is not necessary.

g. <u>Comment</u>: The RAP calls for sampling of indicator parameters on a semi-annual basis, while the ROD calls for the testing of indicator parameters every quarter and the testing of priority pollutants semi-annually.

Response: Figure 4-3 of the RAP shows that analyses for indicator parameters will be done every quarter. These parameters are listed in Table 4-1 of the RAP. The statement in the RAP (Section 4.1.5) that mentions the evaluation of the data to get indicator parameters refers to the addition of certain parameters to the list of indicator parameters on a semi-annual basis. The Target Compound List, a list that U.S. EPA presently uses at Superfund sites, is currently being used for the semi-annual testing. The substances on the Target Compound List are not significantly different from the substances which were analyzed for during the RI at this site.

h. <u>Comment</u>: The ROD does not provide for the averaging of results from water quality analyses of monitoring wells, although the RAP does allow such averaging.

Response: All of the results of the analyses of the monitoring wells will be reported, not just the averages. Averaging of results from the analyses of samples from monitoring wells will be used in making decisions as to what studies will be performed. The ROD does not prohibit the use of averaging, which is a technically acceptable approach.

i. <u>Comment</u>: The RAP states only that criteria for the evaluation of groundwater and surface water will include "appropriate standards," while the ROD calls for compliance with all ARARs and for the performance of appropriate bioaccumulation and general toxicity evaluations.

Response: There is nothing in the RAP which indicates that criteria and standards will not be based on ARARs. Under Section XXIV of the Consent Decree, all work must be consistent with the National Contingency Plan. Therefore, properly identified ARARs must be observed. In addition, the RAP does provide

for the performance of bioaccumulation studies and other biological studies.

j. <u>Comment</u>: The RAP calls for sampling to occur at an island in the River which the Army Corps of Engineers and the Grant County Commissioners removed during the summer of 1990.

Response: The RAP does not provide for sampling on the island, but downstream of the island. Furthermore, only proposed locations are shown in the RAP and locations are, consequently, approximate. The sampling mentioned is actually taking place opposite the north boundary of the site near the west boundary. For clarification, the Army Corps of Engineers did not remove the island, although they were involved in the permitting process, and the island was removed in the winter and spring of 1990.

k. <u>Comment</u>: The RAP's list of basic parameters excludes PCBs and pesticides. The ROD does not allow for such a reduction of the testing parameters.

Response: The ROD does not preclude the deletion of PCBs or pesticides from the list of

parameters for groundwater and surface water testing.

During the RI neither pesticides nor PCBs were detected in the groundwater monitoring wells on the site, the leachate wells, or the surface water.

l. <u>Comment</u>: The RAP preconditions the performance of biological studies on the failure of the groundwater or surface water to meet certain standards, and limits the parameters that will be studied (Section 4.5.1). The ROD, on the other hand, does not precondition bioassay work and lists the classes of compounds from which parameters are to be selected, which list includes, PCBs.

Response: Under the Decree, as more technically defined in the RAP, biological studies will be performed if EPA determines, after additional study of the groundwater, surface waters and the river sediment, that these media are the same as they were at the time that the RI was done, or worse. Given that the purpose of the additional studies in the ROD was to provide information that can be used in deciding whether any further remedial actions are needed at the site to address groundwater and surface water contamination, this is fully consistent with the ROD.

Moreover, the only additional limitations on one type of biological study, a bioaccumulation study, are that the substances that are being evaluated must be

present at the site and have the potential to bioaccumulate (Figure 4-5 of the RAP). The ROD does not prohibit such requirements. In addition, contrary to the commenters' assertion, the ROD makes clear that parameters are to "be selected from" volatiles, PAHs and inorganic constituents. See ROD at 17. In the nomenclature used with the Target Compound List, PCBs do not fall within any of these three classes of substances. Furthermore, as set forth above in Response (k), supra, PCBs were not found in the groundwater or surface water at the site.

m. <u>Comment</u>: The RAP allows for the dilution of contaminants to be considered as an additional "safety factor" when determining if further remedial action is necessary, but the ROD does not permit this.

Response: The RAP does not provide that dilution of contaminants will be considered in determining if further remedial action will be necessary at the site. Decisions regarding further remedial action will be made in accordance with the requirements of the National Contingency Plan.

8. <u>Comment</u>: The Consent Decree and its attachments, in particular the RAP, do not comply with ARARs, as required by Section 121(d)(2)(A) of CERCLA, 42 U.S.C. §9621(d)(2)(A).

Response: Since the Citizens Groups did not specify which ARARs they claim the proposed Decree and its attachments failed to meet, it is very difficult to address this comment. Under CERCLA Section 121(d)(2)(A), a remedy must comply with all applicable or relevant and appropriate Federal environmental regulations, as well as all State environmental regulations which are more stringent than any Federal standard and which the State has identified to U.S. EPA in a timely manner. The interim remedy selected for this site complies with all identified ARARs, as set forth in Section VI(A) of the ROD. The proposed Decree does not alter the interim remedy, and thus comports with the ARARS set forth in the ROD.

<sup>9. &</sup>lt;u>Comment:</u> The proposed Decree "seeks provisions in the ROD and Remedial Action Plan (RAP) to establish alternate concentration limits ('ACLs')" for groundwater and surface water

at the site under the provisions of Section 121(d)(2)(B)(ii) of CERCLA, 42 U.S.C. §9621(d)(2)(B)(ii).

Response: This comment does not identify what Section of the proposed Decree allegedly refers or relates to ACLs. From the context of the comment, it may be referring to paragraph VII(D)(7)(f)(i) of the proposed Decree. However, this provision of the proposed Decree does not refer to, let alone establish, ACLs.

In fact, the ROD and the proposed Decree do not refer to or discuss ACLs because, as outlined above, this interim remedy does not address what action may be needed for groundwater or surface waters at the site, except to the extent that it provides for additional study of these media. U.S. EPA need not establish ACLs for an interim remedy which only addresses the surface soils and on-site wastes.

10. <u>Comment</u>: U.S. EPA has "massaged" monitoring results through statistics and geometric means.

Response: There is absolutely no basis for the assertion that U.S. EPA has massaged monitoring data. U.S. EPA has not engaged in any such activity, and has made, and will continue to make, monitoring data available to the public in the information repository.

11. <u>Comment</u>: The proposed Decree fails to analyze the long-term uncertainties and possible failures of the containment and capping aspects of the interim remedy. Because of these unidentified uncertainties, the remedy is not cost-effective.

Response: Contrary to the commenter's assertions, the FS Report and ROD specifically address the long-term effectiveness, as well as the cost-effectiveness, of the selected remedy. In fact, the evaluation of remedial alternatives in the FS demonstrated that more permanent alternatives involving treatment of the soils, such as incineration, were prohibitively expensive and impracticable when compared with the selected interim remedy. See Section VI(B) of the ROD. It should also be noted that containment technologies, such as the cap in this case, are generally considered appropriate for wastes, such as those here, that pose a relatively low long-term threat to human health and the environment. See Section 300.430(a)(1)(iii)(B) of the National Contingency Plan, 40 C.F.R. §300.430(a)(1)(iii)(B).

Further, the ROD makes clear that, because hazardous substances will remain on-site, the interim remedy will require long-term operation and maintenance and, under Section 121(c) of CERCLA, 42 U.S.C. §9621(c), U.S. EPA must conduct periodic reviews of the effectiveness of the remedy. Thus, in addition to the review of monitoring data and studies, these periodic reviews will assess whether the interim remedial action is protective of human health and the environment and determine whether further action is necessary.

In addition, since this is an interim remedy, the long-term effectiveness and permanence of the remedy will best be evaluated when the groundwater issue is resolved. The fact that this is an interim remedy will not create a false sense of security or lead to land use that will complicate future cleanup, as the commenter suggests. To the contrary, a restrictive covenant prevents use of the site in any manner that may threaten the effectiveness, protectiveness or integrity of the interim remedy.

12. <u>Comment</u>: The sampling presently called for in the ROD may be insufficient to detect "hot spots" of contamination at the site.

Response: During the extensive remedial investigation of this site, U.S. EPA found no physical or documentary evidence to indicate the presence of "hot spots" of contamination on the site. Moreover, it has not received any new information since the RI to indicate that there are any such hot spots on the site.

13. <u>Comment</u>: The proposed Decree does not provide specific technical criteria for subsequent decisions, nor does it provide assurances that U.S. EPA will adequately oversee the settling PRPs' work at the site or that the work will be done properly.

Response: The proposed Decree sets up the framework under which the settling PRPs conduct, and U.S. EPA oversees, the remedial design and action at the site. This ROD calls for monitoring of groundwater and surface water to determine if further action is necessary. Decisions as to whether such actions will be necessary will be made in accordance with the National Contingency Plan.

Second, a number of provisions in the proposed Decree ensure that the work at the site will be done properly. For example, under Section VII of the Decree, U.S. EPA will oversee the development of work plans for the site. Further, Section X of the Decree provides for quality assurance, which includes the preparation of a Quality Assurance Project Plan regarding sampling and analysis. In addition, Section XI of the Decree requires the settling generator PRPs to provide to U.S. EPA and the State, on a regular basis, all sampling results and other data, and to give U.S. EPA and the State, upon their request, split or duplicate samples of all samples which the PRPs collect at the site. Section XII of the Decree further elaborates the settlors' reporting obligations.

14. <u>Comment</u>: U.S. EPA has not taken into account in its remedy the oil and gas wells which are purportedly still on the site and the effect these wells may have on the possible contamination of the lower aquifer.

Response: U.S. EPA was aware of the possible presence of oil and gas wells at the site even before the RI began. However, U.S. EPA never found any such wells at the site. As the site has been used for gravel and then landfill operations for decades, it is not surprising that none of the wells apparently still exist at the site. Regarding the lower aquifer, U.S. EPA found during the RI that the pressure in the lower aquifer was much higher than in the upper aquifer, leading to the conclusion that there is more than likely no direct connection between the two aquifers in the vicinity of the site. Therefore, there is little danger of contamination of the lower aquifer at the site.

15. <u>Comment</u>: The "land ban" requirements of the Resource Conservation and Recovery Act ("RCRA"), which restrict the disposal and placement of contaminated materials, have not been followed at this site.

Response: As U.S. EPA made clear in the ROD, RCRA land disposal requirements are not triggered by the interim remedy. This is because under U.S. EPA's interpretation of RCRA, consolidation of waste within a unit does not constitute

"placement or disposal" under RCRA land disposal restrictions.

Here, the interim remedy calls for consolidation and regrading of
the material already on-site in preparation for the construction
of the cap.

16. <u>Comment</u>: The proposed Decree limits the ability of U.S. EPA and the U.S. Fish and Wildlife service (FWS) to commence an action for natural resource damages.

Response: The proposed Decree does not in any way limit the discretion of any agency to commence a natural resource damages action. To the contrary, the Decree does not address natural resource damages except to expressly reserve, in Section XIX, the natural resource trustee's right to bring a claim for such damages in the future. There is no finding in the Decree, nor will there be any finding during design and implementation of the interim remedy, with respect to natural resource damages which limits the period in which such an action may be brought.

EXHIBIT B

## UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF INDIANA FORT WAYNE DIVISION

\$1,77,11 (200):43

UNITED STATES OF AMERICA,	)
Plaintiff, v.	) No. F 90-00142
RICHARD YOUNT, et al.	<b>\</b>
Defendants.	<b>\</b>
STATE OF INDIANA	
Plaintiff, v.	) ) No. F 90-00180
RICHARD YOUNT, et al.	}
Defendants.	, ) )

## UNITED STATES' MOTION TO ENTER CONSENT DECREE

Plaintiff, the United States, on behalf of the United States
Environmental Protection Agency ("EPA"), hereby moves to enter
the Consent Decree presently lodged with this Court. In support
of its motion, plaintiff states as follows:

- 1. The United States filed a civil complaint against nine defendants under Sections 106(a) and 107 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §§ 9606(a) and 9607, as amended, ("CERCLA").
- 2. The complaint concerns the Marion (Bragg) Dump Site ("Site"), a 72 acre dump site contaminated with hazardous substances which is located in Grant County, Indiana. The United

States seeks injunctive relief to remedy the release and threatened release of hazardous substances into the environment at the Site. The United States also seeks to recover the response costs it has incurred responding to the Site.

- 3. The State of Indiana filed a separate complaint against defendants for related claims arising under CERCLA and state law. On October 1, 1990, this Court consolidated the State's complaint with the United States' complaint.
- 4. Simultaneous with filing its complaint, the
  United States lodged with this Court a proposed Consent Decree
  ("Decree") between the United States, the State of Indiana
  ("State"), and the nine defendants -- Dana Corporation,
  DiversiTech General, Inc., General Motors Corporation, OwensIllinois, Inc., RCA Corporation, Essex Group, Inc., Richard
  Yount, Ruthadel Yount, and the City of Marion, Indiana -- which
  resolves the claims asserted by the governments in this action.
- implement the interim remedy selected by EPA in a Record of Decision issued by the Regional Administrator for EPA Region V. Specifically, the defendants agreed to install a low permeability cover over the Site and to collect further data about the groundwater and surface water by monitoring and studying the Site. EPA will then determine whether any further work should be done at the Site. The defendants will also pay all of the oversight costs incurred by EPA and the State overseeing the defendants' work at the Site.

- 6. It has been estimated that the total package, including the long term maintenance of the cover, is worth approximately \$8.4 million. Under the Decree, a portion of that cost will be borne by the Hazardous Substances Fund, or "Superfund," pursuant to a mixed funding agreement under Section 122(b)(1) of CERCLA, 42 U.S.C. § 9622(b)(1).
- 7. After lodging the Decree with this Court, the United States published a notice of the lodging of the Decree in the Federal Register and offered the public an opportunity to comment on the Decree for thirty days. Subsequently, at the request of certain persons, the United States extended the public comment period to sixty days.
  - 8. During the comment period, the United States received a number of written comments on the Decree. After reviewing and considering these comments, the United States has determined that the comments do not disclose facts or considerations which would indicate that the Decree is inappropriate, improper or inadequate. To the contrary, the Decree avoids the wasteful expense and delay of complex litigation, and conserves Superfund monies for use at other sites. More importantly, it has already resulted in expedited implementation of most of the interim remedy.

The comments and the United States' response are attached as Exhibits A and B to the Memorandum of Law in Support of the United States' Motion to Enter.

#### CONCLUSION

Accordingly, the United States respectfully moves this Court to approve and enter the Decree as a final judgment.

Respectfully submitted,

RICHARD B. STEWART

Assistant Attorney General

Environment and Natural Resources

Division

United States Department of Justice

SAMUEL B. BOXERMAN

Environmental Enforcement Section Environment and Natural Resources Division

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EXHIBIT B

Assistant Attorney General Environment and Natural Resources Division Department of Justice Washington, D.C. 20530

RE: U.S. v. Yount, D.J. Fed. No. 90-11-3-251

## Dear Sir:

Please accept our formal request of time extension on the written Comment Period for the above referenced matter concerning the Marion/Bragg Dump CERCLA site perposed Consent Decree. We request that the comment period be extended a minimum of 90 (ninety) days from September 7, 1990. We do not feel that this request is unreasonable nor that it will in any way interfere or delay the implimentation of the remedial action since the work is already being performed by the parties who have signed the Consent Decree and since the work is near completion.

The reasons for extension of the comment period for the public are appropriate since nearby concerned residents, the City of Marion, the State of Indiana, and local environmental groups have been effectively barred from obtaining detailed information and receipt of official response pertaining to comments and questions submitted to U.S. EPA which are critical to the Remedial Action now being implimented under the proposed Consent Decree. Specifically:

- 1) Portions of the proposed Consent Decree still are not finalized such as the RD/RA Work Plan and consequently are not available for public distribution or comment. Even though the State of Indiana has not given their required mutual approval, field activities have commenced without the final RD/RA work plan and its' full approval as required under the terms of the proposed Consent Decree.
- 2) Notice of the comment period apparently appeared in the Federal Register on August 8, 1990. However, the public was not informed of the lodging of the proposed Consent Decree until an advertisement was placed in the Chronicle-Tribune, Marion, IN, on August 16, 1990. This notice did not give details or the dates of the public comment period nor any address for submittal of written comments. The public was not informed of comment period details until August 21, 1990 at which time a public availability session was held in the Grant County Complex Building, County Council Chambers at 7:00pm, by Ms. Karen Martin, Community Relations Coordinator; Mr. Bernie Shorle, Remedial Project Manager; and Ms. Alison Gavenson, Attorney; Region V, U.S. EPA, Chicago, IL, and Ms. Gabriele Hauer, Site Management Section, IDEM.

The U.S. EPA did mail out a notice of the comment period which was received by some local residents on Monday, August 20, 1990. Thus, concerned area residents who were lucky enough to be on the U.S. EPA's Marion/Bragg Dump mailing list first learned of the comment period of the proposed Consent Decree on the 13th day of the "thirty day" comment period.

- 3) What are believed to be "Significant Changes" to the proposed Consent Decree and Attachments were made during negotiations, subsequent drafting of Attachments, and detailing of work plan documents after the public comment period on the RI/FS, the finalizing of the Record of Decision (ROD), and the signing of the initial proposed Consent Decree took place. These changes, in addition to such tactics practiced by Mr. Bernie Shorle such as sending dated technical documents for comments to the staff of the Indiana Department of Environmental Management for review and comment after specific comment deadlines ended, have effectively eliminated required participation and comment by the public, the City of Marion, IN, and the State of Indiana on the proposed Consent Decree. Comments and questions, raised by both the State of Indiana and local citizens, critical to the implementation and effectiveness of the current Remedial Action have, by large, gone unaddressed by U.S. EPA Region V, staff and the parties who have signed the proposed Consent Decree. Until this information is fully disclosed it will be exceedingly difficult to submit informed and detailed comments relevant to the proposed Consent Decree.
- 4) No notice(s) of Significant Change have ever been issued in the above referenced matter concerning the Marion/Bragg Dump CERCLA site. Since the public, City of Marion, IN, and State of Indiana have never received any notice(s) of Significant Change such as non-compliance with ARARs and the disregard of requirements of Indiana Department of Environmental Management regulations, this will impede meaningful public comment on such changes without the information required in a notice of Significant Change. Significant Changes set out in terms negotiated subsequent to signing of the initial proposed Consent Decree include: conditions which may lead to the selected Interim Remedy becoming the "Final Remedy" if it is determined that no impact results from the continuous release of contaminated groundwater. Information required to determine these impacts such as required additional studies concerning fish bioassay work and general toxicity tests will probably not be done due to the fact that the ERM Remedial Action Plan is designed to avoid possible remedial action beyond a clay cap, a fence, and flood control. The ERM Remedial Action Plan proposes to average monitoring well results in assessing site impacts and uses vague language for groundwater and surface water standards in leu of defined limits. Bioassay studies are now contingent upon the results of a biosurvey, one of which has been shown to conclude no impact from the site and thus would now preclude the chance of additional studies ever being done. The biosurvey study could not conclude any attributable impact to the site because of current impact upon the Mississinewa River upstream, whereas a properly designed and carried out bioassay could effectively determine site specific impacts. In addition, the assessment of impacts or risks by U.S. EPA is suspect since it appears that when standards or criteria are about to be exceeded, monitoring data has been massaged through statistics and geometric means rather than the use of individual maximum concentrations for contaminates.

- 5) The integrity of the site is still in question as the site boundaries for waste disposal still are not completely defined. As recently as Spring 1990, additional landfill material was unearthed along the river bank due to heavy rains knocking down trees along the river. Additional modifications will now result due to this "discovery" that portions of the landfill due indeed make up sections of the river bank. The public, City of Marion, IN, and State of Indiana have yet to be informed of details of the required modifications in the current Remedial Action and thus cannot comment on them.
- 6) The selected Interim Remedy does not prevent groundwater contamination or its' migration off-site. This is especially significant due to the possibility of the "Interim" Remedy becoming a "Final Remedy". Statements such as; "dilution, as it occurs, may be considered as an additional safety factor, is contrary to the intent of the Superfund Amendments and Reauthorization Act (SARA). The proposed Consent Decree should include a plan designed to direct remediation to definite standards while taking into account long-term groundwater monitoring for slow migration of leachate, water table fluctuation, and the future release or potential release from buried drums and unknown wastes into the groundwater. As now planned, the delay in monitoring results which should measure the effectiveness of the Interim Remedy rather than "show the effectiveness of the remedy" and the adapting of current results to convenient "standards" thus skewing results via averaging is tantamount to playing with the data and risking the public's health. development of procedures for the handling of these monitoring results out of the public's purview and after the signing of the initial proposed Consent Decree offers no meaningful ability for public, City, or State comment.
- 7) The City of Marion was coerced into accepting operating and maintenance costs as a named and settling Potential Responsible Party (PRP). These costs are potentially open ended and already have been significantly increased since the signing of the initial proposed Consent Decree. Once again, critical information concerning details of the current Remedial Action and the extent of the City's liability have not been made available. Due to the lack of information, meaningful and informed comments on these details of the proposed Consent Decree cannot be made by the public, City of Marion, and State of Indiana.

In general, the importance of extending the public comment period in view of the manner in which the above referenced matter concerning the Marion/Bragg Dump CERCLA site has been conducted cannot be overstated. The procedures utilized by U.S. EPA's staff and parties who have signed the proposed Consent Decree set a bad precedent and will continue the Marion/Bragg Dump legacy of one bad decision after another. Even though the selected remedy is controversial in its' effectiveness, having been ranked by seven national environmental organizations as one of the ten worst Record of Decisions made by U.S. EPA in 1987, the lack of requested information and data compounded by the voluminous amounts of existing documentation must be taken into account in considering this request.

The public, City of Marion, IN, and the State of Indiana must be given the opportunity to provide meaningful written comments on the proposed Consent Decree. Therefore, we request a proper comment period with an extension of time to allow for the receipt of timely responses to requested information from the U.S. EPA and parties signing the proposed Consent Decree. The public comment period must allow an adequate period of time for comment on all relevant and pertinent information related to the proposed Consent Decree. Thank you for your concerned cooperation in this matter.

Respectfully,

Marijean Stephenson, President

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## VIA CERTIFIED MAIL AND TELECOPY

September 7, 1990

Mr. Richard B. Stewart Assistant Attorney General Environment and Natural Resources Division Department of Justice Washington, D.C. 20530

Ref: U.S. v. Yount, D.J.Ref.

No. 90-11-3-251

RE: Comments on Proposed Consent Decree

Dear Sirs:

The consent decree now proposed in settlement of EPA's claims concerning the Marion-Bragg Superfund site is unfair and should be withdrawn or modified. The consent decree does not equitably allocate the costs of clean-up among entities that allegedly sent materials to this landfill, in violation of CERCLA's mandate to equitably apportion liability among responsible parties. In other respects, as well, the consent decree is inconsistent with CERCLA, violates basic due process rights of non-settling entities, and disserves the public interest.

The proposed consent decree preauthorizes reimbursement of response costs to the settling defendants from the Superfund in the amount of \$1.775 million or 25 percent of total eligible costs, whichever amount is less. In making application for "mixed funding," the settling defendants named over 100 companies or individuals as PRPs from whom EPA could, in turn, recover the expenditure from the Superfund. In addition, the consent decree proposes that all past costs shall be recovered from non-settling PRPs. EPA's project manager now estimates that those past costs equal approximately \$200,000 to \$250,000. In total, the proposed decree will require that EPA pursue non-settling PRPs for nearly \$2,000,000 or possiply one-third of the total cost of

remediating the site under the interim remedy selected by the agency. This appears to be an arbitrary and irrational allocation of response cost liability and seems likely to assign to non-settling entities response costs far in excess of the volume or toxicity of material sent by the non-settlors to the site.

The undersigned represent the Committee for Marion-Bragg Landfill De Minimis Buy-Out ("the Committee"), a newly forming group of companies alleged to have sent small quantities of material to the landfill. The Committee strongly objects to the allocation of costs between settlors and non-settlors under the proposed consent decree as completely and unjustly arbitrary. attempt apparently has been made to allocate these costs on the basis of volume, toxicity, mobility or any of the other factors typically relied upon to establish equitable apportionment of EPA's project coordinator, assistant regional counsel, and information officer, as well as staff from the Indiana Department of Environmental Management have all stated that EPA is not in possession of reliable volumetric data and, moreover, volumetric data is of no concern to EPA. Without such data, however, it is clear that EPA, the Department of Justice, the settling PRPs, and the United States District Court for the Northern District of Indiana cannot demonstrate that the proposed decree equitably distributes costs, nor whether the decree is in the best interest of the public at large.

CERCLA states that liability should be apportioned equitably. For example, 42 U.S.C.§ 9613(f)(1) provides that "[i]n resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate." Also, 42 U.S.C. § 9622(e)(3)(A) provides that "[t]he President shall develop guidelines for preparing nonbinding preliminary allocations of responsibility. In developing these guidelines the President may include such factors as the President considers relevant, such as: volume, toxicity, mobility, strength of evidence, ability to pay, litigative risks, public interest considerations, precedential value, inequities and aggravating factors."

The federal courts have recognized CERCLA's mandate to apportion liability equitably between settling and non-settling parties. In <u>United States v. Laskin, et al.</u>, Case No. C84-2035Y, N.D.Ohio (Feb. 27, 1987), the court specifically held that:

. . . if the government accepts a settlement of less than the combined equitable share of the settling defendants, the government may not recover the remaining portion of the settling defendant's equitable share from the non-settling defendants. Accordingly, non-settling defendants will not, through the effect of joint and several liability, be required to pay to the government any share of the costs properly attributable to acts of the settling defendants. This Court will use its equitable powers to prevent any grossly unfair allocation of liability and will utilize the concept of comparative fault of the parties where such application is reasonable.

In support of its holding, the <u>Laskin</u> court quoted from <u>United</u> <u>States of America v. Conservation Chemical Co.</u>, 628 F.Supp. 391, 401-402 (W.D. Mo. 1985):

. . . the effect of settlements upon non-settling parties should be determined in accordance with the 1977 Uniform Comparative Fault Act for the reason that the principles of that model act are the most consistent with, and do the most to implement, the Congressional intent which is the foundation for CERCLA.

Because EPA has no reliable volumetric or toxicity data and has admitted that it has not entered into any kind of equitable analysis in apportioning liability between settlors and nonsettlors, the proposed consent decree violates common law and statutory rules of equity. No one has been able or willing to provide hard data suggesting that the proposed decree is even reasonably equitable. The undersigned have contacted EPA, IDEM, DOJ, and attorneys for at least one of the settling parties to find this information, but to no avail. The undersigned requests that the Department of Justice withdraw the proposed consent decree until such time as data can be prepared that demonstrates that the decree is equitable as between the settlors and non-settlors and that the settling parties are paying their fair share for the clean-up of the Marion-Bragg site. Alternatively, the undersigned would ask that the Court refuse to enter the decree as final until it is convinced that the decree is equitable.

The Committee also objects to the entry of the proposed consent decree on due process grounds. First, virtually all of the undersigned companies have had no notice of the proposed decree prior to one week ago. The undersigned companies are aware of other entities allegedly liable for payment of clean-up costs that to date have received no notice of the consent decree terms. It is fundamentally unfair that this unsuspecting group of businesses, whose proportionate share of clean-up costs may be affected by entry of the consent decree, received no notice from EPA of the pendency of the decree or the opportunity to comment thereon.

Second, the required notice procedure itself has not been followed by the government. For example, a copy of the proposed decree was not available for public inspection and copying at all of the locations identified in the Federal Register notice. On August 27, 1990, the Environmental Enforcement Section Document Center at 1333 F Street N.W. in Washington D.C. reported that it did not have a copy of the proposed decree for inspection or copying despite the fact that notice had been placed in the Federal Register on August 8, 1990, stating that a copy of the decree would be available there.

Third, the majority of the Committee's members were never contacted either by EPA or the settling defendants about their possible participation in the proposed decree. Most of the Committee members and many other allegedly responsible parties have not been given any opportunity to settle, yet they will be exposed to substantial risk once the decree is made final. The settling defendants and EPA obviously believe that the alleged PRPs are connected to the Marion-Bragg Landfill in some way. It is inconceivable that the government would entertain settlement with any parties without affording all parties with an obvious interest in the case any meaningful opportunity to participate in or comment on the proposed settlement.

Finally, delaying entry of the consent decree to address the problems raised in this letter will not negatively affect EPA's and the public's legitimate concern that the Marion-Bragg site be remediated as quickly as possible. According to information shared by EPA at a public meeting in Marion on August 21, 1990, the remedy selected under the Record of Decision has all but been completed. The public will be better served if EPA and the settling defendants are required to demonstrate that the settling parties -- who are the ones primarily responsible for the problems at the Marion-Bragg site -- will pay a fair share of the remediation costs.

Thank you for considering these comments.

Very truly yours,

George M.) Plews

Committee for Marion-Bragg Landfill <u>De Minimis</u> Buyout

Atlas Foundry
Anchor Glass Container
Bowman Construction
Town of Fairmount
General Plastics
Indiana Bell
Marion Paving



August 29,1990

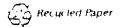
Assistant Attorney General Environmental and Natural Resources Division Department of Justice Washington, D.C. 20530

RE: U.S. v. Yount, D.J. Fed. No. 90-11-3-251

Dear Sir,

Please except our formal request of time extension on the written Comment Period for the above referenced matter concerning the Marion/Bragg CERCLA Site proposed Consent Decree. The Hoosier Environmental Council has many concerns about both the content of the proposed Consent Decree, and the lack of adequate public notice of the Comment Period on the proposed Consent Decree. In addition, information vital to the ability of the public, the City of Marion, and the State of Indiana to make meaningful and informed comment has not been made available. Specifically:

- 1) The RD/RA Work Plan is not completed, and therefore not available for required review and comment, and field studies have commenced without the required mutual approval of the State of Indiana.
- 2) The public was not given adequate notice of the dates of the comment period. A notice of lodging of the proposed Consent Decree was in the local paper, but no details giving dates, or addresses for submitting comments were published. The only adequate notice given to the citizens of Marion, was at a public availability meeting on August 21, 1990, 13 (thirteen) days after the beginning of this thirty day comment period.
- 3) Many "Significant Changes" have been made to the proposed Consent Decree without the required review and comment of the State, the City, and the public. No notice(s) of Significant Changes were ever issued for matters such as the non-compliance of ARAR's and the disregard for State regulations.
- 4) Many of these Significant Changes could result in the Interim Remedy becoming a Final Remedy for this site. The method of



determining "impact" from the site, which would necessitate further remediation, is designed to avoid any further remediation, through the use of "dead-end" flow charts, and the dependance on unreliable data. Specifically, the U.S. E.P.A. has used a procedure for the assessment of risks that will average levels of contaminants for certain pollutants, while using maximum concentrations levels for other contaminants, likely skewing results in a way that appears to show "no impact."

- 5) Modifications have been made to the boundaries for waste disposal at this site, and as of yet no one has been informed as to the modifications that have been made to the Remedial Action Plan.
- 6) As currently planned, delays in groundwater monitoring, and the averaging of sample results are not elements of the proposed Consent Decree. The procedure for obtaining these results has been designed without public purview, and after the signing of the initial proposed Consent Decree.
- 7) The City of Marion, Indiana was coerced into accepting operating costs as a named Potential Responsible Party. These costs are open-ended and have increased significantly since the proposed Consent Decree was signed. Critical information concerning the details of the Remedial Action Plan, and the extent of the City's liability have not been made available.

Clearly, given such short, and inadequate public notice, and in the absence of vital information, meaningful and informed public comment on this matter is impossible. The public has made a concerted effort to obtain much of this information, but within the given time frame and without the full cooperation of the U.S. E.P.A., this is a difficult task. The procedures utilized by the U.S. E.P.A.'s staff and the parties signing the proposed Consent Decree set a bad precedent, and will continue the Marion/Bragg legacy of one bad decision after another. Given the proper opportunity for comment in this matter after receipt of necessary information, we will be better able to make a decision that reflects what is best for the citizens of Marion, and the State of Indiana. The public comment period must allow adequate time for comment on all relevant and pertinent information relating to the proposed Consent Decree. Thank you for your cooperation in this matter.

Respectfully Submitted,

Jeffrev Stant

Executive Director, HEC

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## PENDYGRAFT PLEWS & SHADLEY

ATTORNEYS AT LAW

GEORGE W. PENDYGRAFT+)
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- \* ADMITTED INDIANA AND NEW YORK
- " ADMETTED ENDIANA AND ILLINOIS
- \*\*\* ADMITTED INDIANA AND CALIFORNIA
- \*\*\*\* ADMITTED IN ARIZONA
- \*\*\*\* ADMITTED IN INDIANA, CALIFORNIA AND ARIZONA
- + ADMITTED U.S. PATENT AND TRADEMARK OFFICE

August 30, 1990

Mr. Richard B. Stewart
Assistant Attorney General
Environmental and Natural Resources Division
Department of Justice
Washington, DC 20530

RE: United States v. Yount, et al., D.J. Ref. 90-11-3-251.

Dear Mr. Stewart:

This firm is preparing comments in response to the consent decree lodged in the above-captioned matter in the Northern District Court of Indiana (Ft. Wayne) on July 20, 1990. We currently represent Anchor Glass Container ("Anchor Glass"), one of the non-settlors at the Marion-Bragg site. By this letter Anchor Glass requests that you extend the comment period in this matter an additional thirty days, to and including October 7, 1990, for the following reasons.

First, pursuant to 42 U.S.C. § 9622(d)(2)(B), 28 C.F.R. § 50.7, and Section 27 of the proposed consent decree, the attorney general must allow at least thirty days for comment by parties not participating in the consent decree. Nothing prohibits your office from extending the comment period.

Second, under the terms of settlement embodied in the proposed consent decree, non-settlors may be liable for EPA's past oversight costs at the site plus \$1.775 million or 25% of the eligable remediation expense incurred by the settling parties, whichever is less. Anchor Glass has made requests for volumetric data concerning the waste at the site, but has not yet received any such information. To date, this information has not been available from either Region V or the Indiana Department of Environmental Management. Without such volumetric data, it is not clear that the proposed consent decree fairly allocates liability. Anchor Glass believes that thirty days is an insufficient period to assemble the kind of data necessary to make meaningful comment.

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Third, Anchor Glass believes that the notice procedure may have been defective because a copy of the proposed decree may not have been available at all of the locations identified in the Federal Register notice. On August 27, 1990, a clerk at the "Consent Decree Library" in Washington D.C. indicated that the library did not yet have a copy of the proposed decree for review or copying purposes despite the fact that notice had been placed in the Federal Register on August 8, 1990.

Fourth, most of the non-settlors have not received any notice of the proposed consent decree. Although we are contacting non-settlors now and telling them that the decree has been filed, most will not have had any reasonable period to review the decree or to comment prior to September 7.

For all these reasons, Anchor requests that the comment period be extended to October 7, 1990. Because there is so little time until September 7, Anchor would appreciate it if you could let me know your response as soon as possible. Thank you for your consideration.

GMP/rlq



Box sury Natural Resources
Defense Council

40 West 20th Street New York, New York 10011 212 727-2700 Fax 212 727-1773

October 9, 1990

Mr. Richard B. Stewart, Esq. Assistant Attorney General Environment and Natural Resources Division Department of Justice Washington, DC 20530

Re: United States v. Yount, et al., D.J. Ref. 90-11-3-251

Dear Mr. Stewart:

In reviewing my letter to you of yesterday's date concerning the above-referenced matter, I have noticed typographical errors on the second page. The second paragraph in Comment 3 on that page should read as follows:

It is not clear from the proposed consent decree how the final remedy will comply with the requirements of the Clean Water Act. It is also not clear on what timetable compliance with the Clean Water Act will be achieved. Again, I request a clarification of these points.

Thank you for taking note of this change. I apologize for any inconvenience caused by the original error.

Yours truly

James F. Simon Senior Attorney

JFS/kr

cc: Larry Davis
EPA Region V

90-113251





40 West 20th Street New York, New York 10011 212 727-2700 Fax 212 727-1773

October 9, 1990

## BY FAX AND MAIL

Mr. Richard B. Stewart, Esq. Assistant Attorney General Environment and Natural Resources Division Department of Justice Washington, DC 20530

Re: United States v. Yount, et al., D.J. Ref. 90-11-3-251

Dear Mr. Stewart:

I submit these comments on behalf of the Natural Resources Defense Council, Inc. concerning the proposed Consent Decree in <u>United States v. Yount, et al.</u>, D.J. Ref. 90-11-3-251. We understand that the comment period on this proposed decree was extended until yesterday; however, yesterday was Columbus Day, a national holiday.

NRDC is a not-for-profit tax-exempt organization dedicated to protecting public health and the environment. NRDC has over 130,000 members throughout the country, including over 1100 members residing in Indiana. NRDC maintains ongoing programs to monitor the effects of hazardous substances in the environment and works with other environmental groups and government agencies to identify and reduce risks to public health and the environment from exposure to harmful pollutants.

Comment 1: The Proposed Remedy is an Interim Remedy.

It is our understanding that the actions described in the proposed Consent Decree represent only an interim remedy for remediation of the Marion/Bragg Landfill and protection of the surrounding environment. Our understanding is based on EPA's Record of Decision Summary for the Marion/Bragg Landfill, Marion, IN (9/30/87) (the "ROD"). I would appreciate confirmation that this understanding is correct, or if is not correct, an 10/1-3-35

Richard B. Stewart, Esq. October 9, 1990
Page 2

<u>Comment 2</u>: The Decision as to Final Remedy Must Be Made With Full Public Participation.

A decision as to a final remedy -- including a decision to require or not to require additional cleanup under the terms of the consent decree -- must be made pursuant to the full public participation requirements of the Comprehensive Environmental Response Compensation and Liability Act, 33 U.S.C. §§ 9601-75.

It is not clear from the proposed consent decree how the decision of final remedy will be made and how public participation will be allowed in that decision. Also, the timetable for making the decision about final remedy is not clear. I request a clarification of these points.

<u>Comment 3</u>: A Final Remedy Must Comply with the Requirements of the Clean Water Act.

In its present form, the Consent Decree contains no provisions mandating compliance with the NPDES permitting requirements under the Clean Water Act, 33 U.S.C. §§ 1311, et seq. (the "Act"). The final remedy must comply with the requirements of the Clean Water Act.

It is not clear from the proposed consent decree how the final remedy will comply with the requirements Consent Decree must contain provisions ensuring compliance with the Act and its permitting requirements. It is also not clear on what timetable compliance with the Clean Water Act will be achieved. Again, I request a clarification of these points.

In connection with compliance with the Clean Water Act, it is worthwhile to note several points evident from the ROD. The ROD indicates that an aquifer beneath the Site carries contaminated groundwater into the Mississinewa River (the "River"). ROD at 3. That aquifer perennially saturates at least 4 percent of the dump's total volume, and it "purges [into the River] every 2.2 years, or 7 times in the last 15 years." Id. The groundwater discharged through the aquifer into the River contains many chemicals in amounts exceeding standards for the protection of human health and aquatic life. ROD, Table 2, Summary of Groundwater Sampling Results.

The EPA's ROD also indicates that the EPA weighed the groundwater's impact on the River using a NPDES analysis that establishes discharge limits, and found that there were "potential problems" from arsenic and ammonia. ROD at 8. The

Richard B. Stewart, Esq. October 9, 1990
Page 3

ROD notes that arsenic is high on-site, that it could be bioaccumulating at a very low level, and that the on-site groundwater ammonia levels have the potential to harm aquatic life in the River. <u>Id</u>. Thus, chemical pollutants regulated by the Clean Water Act are discharged by the Site into the River from the aquifer that runs through the Site.

The EPA has recognized that the currently proposed remedial plan "does not aggressively manage the migration of groundwater to the surface water(s)." ROD at 11. Infiltration through the landfill is only reduced from 13.0 to 4.13 inches. <u>Id</u>. In addition, an off-site pond feeds the aquifer that flows through the Site, ROD at 3. The on-site pond, which covers a substantial portion of the Site, <u>see</u> ROD, Appendix F, Map of Site Delineating Cap Portion, would presumably also feed the aquifer with rain water.

## Conclusion

Under these circumstances, it is important for the public to be involved in crucial decisions concerning the final remedy. I appreciate your clarification on these important matters.

James F. Simon Senior Attorney

JFS/kr

cc: Larry Davis

Concerning the matter of the marion Brogg Duong CERCLA site proposed Consent Decree (U.S. V. yount, S. J. Fed. No. 90-11-3-251) we feel an extension of commentes have to pay for clean-up when weste management, due. has net settled and is being paid for The clean-up? The clay cap remedy is not a protective solution to the Clean - up, either postrary to what The proposed Coment Delies Rays, we feel we must have more time to comment on the propagation comment on the proposed Consent Decree and wares appreciate your lelp and Consideration in their matter Charles Jarrell Shirley Janes



RE: U.S. v. Yount, D.J.Fed No.90-11-3-25

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Connie Byer 517 N. Washington St. morion, Indiana 46952

RE: U.S. v. Yount, D.J.Fed No.90-11-3-251

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Wiendy D. Dadley

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Marie dapper.

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File For 2131 Children in 4952

Dollie Eldridge P.O. Box 2131 Marion, IN 46952

RE: U.S. v. Yount, D.J.Fed No.90-11-3-251

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Kinia M. Draker 109 & 700 E Marion, An. J 6953 11-3-25/ DEPARTMENT OF JU: SEP 1:1990

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Marion, Ind.

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DEPARTMENT ...

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Mayer avid

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Assistant Attorney General Environment and Natural Resources Division Department of Justice Washington, D.C. 20530

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Mr 1 Mrs Ray D Smith DEPARTMENT ?

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MORCEMENT RECORD

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Raymond a Gulley 1-3-251

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## Final Written Comments on Marion/Bragg Dump Proposed Consent Decree...

The Honorable
Richard B. Stewart
Assistant Attorney General
Environment and Natural Resources Division
Department of Justice
Washington, D.C. 20530

RE: U.S. v. Yount, D.J. Fed. No. 90-11-3-251

Sir:

Please accept written comments on the above referenced matter concerning the Marion/Bragg Dump CERCLA site proposed Consent Decree\*. Thank you for your consideration and approval of an extended public comment period. The additional written comments for your and the court's consideration are as follows:

The proposed Consent Decree is inappropriate, improper, and/or inadequate and should be withheld or modified\*\* until such time as all reasonable comments and concerns have been addressed and satisfied. These comments are both of a legal and technical nature and include the manner in which the public and public officials have reached this point in the process of proposing this Consent Decree.

The public and Parties including the State of Indiana, the City of Marion, residents and local environmental groups have been procedurally and effectively barred from this matter since the signing of the initial draft of the Consent Decree. The public has not been able to obtain needed information concerning critical elements of the Consent Decree and its requirements. The Indiana Department of Environmental Management's (IDEM) comments on elements of the Consent Decree, Appendices and related technical work documents have largely gone unaddressed by the United States Environmental Protection Agency (U. S. EPA) and the Generator Defendants.

As now drafted the proposed Consent Decree\* will ensure that the interim remedial actions become the Final Remedy for this site. The proposed Consent Decree embodies "Significant Changes" from the Record Of Decision (ROD) of September 30, 1987. The proposed Consent Decree exceeds the statutory authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The proposed Consent Decree does not meet the goals, objectives and requirements of the ROD and is inconsistent with all of the requirements of SARA.

- \* As use in this document the term "Consent Decree" includes all Appendices and other attached or incorporated documents related to this Consent Decree.
- \*\* Modification should include consideration of reopening and/or amendment of any portion of this Consent Decree, including the ROD, as necessary to meet the requirements of all applicable or relevant and appropriate requirements or laws.

The Department Of Justice (DOJ) in fulfilling its established policy of consent to a proposed judgment in an action to enjoin discharges of pollutants into the environment only after or on condition that an opportunity is afforded persons (natural or corporate) who are not named as parties to the action to comment on the proposed judgment prior to its entry by the court should consider that a critical incorporated and enforceable portion of the proposed Consent Decree still has not been finalized. The RD/RA Work Plan is currently not available for public distribution or comment. This is inconsistent with Appendix 5 of the ROD in which the U. S. EPA response to legal comments by Mr. Hanson states; "The Agency generally does not submit a work plan for RD/RA to public comment since it represents implementation of a remedy already the public has already commented on. The plan, however will be put in the repository for review."

The RD/RA Work Plan includes, but is not limited to, the submittal and implementation of the following project plans: (1) a sampling and analysis plan; (2) a health and safety/contingency plan; (3) a plan for satisfaction of permitting requirements; (4) a quality assurance project plan or plans; (5) a groundwater monitoring plan; and (6) an operations and maintenance plan. Specific details of these plans will determine the effectiveness and protectiveness of the "Interim" Remedy. The RD/RA Work Plan will control the development of additional data, its quality, and subsequent evaluation of any final remedial work that may be required at the Marion/Bragg Dump. Adequate written comments on this element of the Consent Decree and whether it is proper, appropriate, and/or adequate and meets the requirements of all applicable or relevant and appropriate requirements or laws cannot be submitted until these documents are available for public comment. Department of Justice policy should apply.

Field activities have commenced without the final RD/RA Work Plan or its approval as required under the terms of the proposed Consent Decree. The State of Indiana after signing the initial draft of the Consent Decree did not give their mutual approval as required under Section VII (D) (6). This Section states; "Settling Defendants shall proceed to implement the work detailed in the RD/RA Work Plan if and when the RD/RA Work Plan is fully approved by U. S. EPA. Unless otherwise mutually agreed by the parties, the Defendants shall not commence field activities until approval by U. S. EPA of the RD/RA Work Plan and the Health and Safety Plan." The State is a Party.

Lack of IDEM concurrence is believed to be the result of disregard of detailed comments submitted to the U. S. EPA and Generator Defendants. These comments include comments on the following Consent Decree related documents: the Draft Quality Assurance Project Plan; an August 29, 1989 memo of de maximis, Inc. regarding the Quality Assurance Project Plan; the Draft Sampling and Analysis Plan; the Draft Ground Water Monitoring Plan; and the Draft Remedial Design/Remedial Action (RD/RA) Work Plan. An IDEM letter of October 24, 1989, to U. S. EPA, Region V from Mr. Reginald O. Baker, Chief, Site Management Section, Office of Environmental Response, states; "It has become very evident due to the lack of corrections made that the comments IDEM submitted to previous versions of these documents have been ignored. Justified responses to the State's comments are expected."

Further justification of the IDEM's dissatisfaction is documented in a December 1, 1989 letter to U. S. EPA in which Mr. Baker points out that; "IDEM received the rest of the document attachments on November 16, 1989. It is obvious that the IDEM could not submit the comments within the set deadline of November 15, 1989, when EPA was suppose to submit all QAPP [Quality Assurance Project Plan] comments to the PRPs. We request that IDEM comments still be incorporated in the final version of the QAPP. With regard to any future submission, it is IDEM's desire to receive submissions simultaneously with the U. S. EPA rather than after the U. S. EPA has reviews the document."

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The responsibility in this area clearly rests with the U. S. EPA as set out in Paragraph XIII. B. of the proposed Consent Decree which states; "To the maximum extent possible, except as specifically provided in the Consent Decree, communications between Generator Defendants, the IDEM and U. S. EPA and exchange of all documents, reports, approvals and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Decree shall be made between the Project Coordinators and the RPM." The circumstances surrounding the disposition of the State's comments concerning critical elements of the proposed Consent Decree have created conditions which are inappropriate, improper, and/or inadequate and suggest that the DOJ or court should require the proposed Consent Decree to be modified or withheld until such time as all reasonable and pertinent comments and concerns of the State of Indiana have been addressed and satisfied.

The proposed Consent Decree embodies "Significant Changes" from the ROD of September 30, 1987. These "Significant Changes" in the proposed Consent Decree and Attachments were made during negotiations, subsequent to the signing of the Initial Draft Consent Decree and finalizing of the ROD. Direct conflicts exist between the ROD, Consent Decree and Appendices such as the Remedial Action Plan (RAP), for example:

In his statement of Declaration for the Record Of Decision September 30th, 1987, Valdas V. Adamkus, Regional Administrator, Region V, states that; "Concurrent with the implementation of the interim measures, the United States Environmental Protection Agency (U. S. EPA) will further study the nature of groundwater contamination on fish consumption and potential impacts to aquatic life and the environment." A major component of the selected remedy includes the requirement to; "Monitor the ground water to determine the effectiveness of the interim remedy and conduct additional studies, as necessary, to complete the remaining ground water and on-site pond operable units."

The ROD under Section II (D) (2) (b) states that; "the difficulty with the water quality criteria is that many of the inorganic constituents have levels set for protectiveness of either the aquatic life or human consumption which are well below analytical detection limits. Therefore, it is conceivable that bioaccumulation could be occurring either from the sediments or the water, which is not evident based on existing data. Bioassay work is needed to determine if a risk is present to human health from this surface water/sediment pathway."

The ROD under Section II (D) (4) (b) states; "Aquatic species are very sensitive to low concentrations of some inorganics." "Arsenic, however, is high on-site and has the potential to affect humans consuming fish. The aquatic life criteria for protection of fish ingestion is .0175 ppb. Since this level cannot be analytically detected in the surface water, arsenic released from the site could be bioaccumulating at very low level. In addition, the on-site ground water ammonia levels have the potential to adversely impact aquatic life in the river. This is particularly a concern since elevated ammonia concentration have been detected in the river. In two samples, it was above the State of Indiana water quality criteria."

In selecting the Interim Remedy the ROD states under Section IV (B) Alternative 1 that; "This alternative minimizes but does not eliminate, leaching of contaminants to the ground water. The alternative relies upon monitoring to ensure that levels protective of the surface water(s) and their uses is still achieved. If protective levels are exceeded then additional remedial actions would be indicated." The ROD further specifies in Section IV (C) Evaluation Summary that; " Neither alternative, however, addresses the groundwater pathway in terms of direct human consumption or discharge to surface waters. Therefore, both alternatives rely on monitoring to ensure that levels released are not above action levels. If action levels are exceeded, groundwater pump and treat or other active protective actions will be required." Table 5 in Section IV states that Alternative 1) Sanitary Landfill Cap, Pond Open; "Will significantly reduce infiltration, but long-term monitoring will be required." In its Rationale for Selection of an Interim Remedy the ROD states that; "the sensitive water quality criteria for inorganics, especially arsenic, and the presence of ammonia, suggest that a potential threat to aquatic resources does exist. In order to be conservative in selecting a ground water remedy to ensure protectiveness, additional ground water studies are recommended. These studies will focus on the general toxicity, if present, of this ground water on the surface waters or to humans through fish ingestion."

Under Section V of the ROD, Monitoring in addition to 10 groundwater wells includes that; "The existing leachate wells and the off-site pond will also be sampled occasionally. Should the ground water results remain relatively consistent over time, monitoring may not need to be as extensive." In Section V Determine the Effectiveness of the Clay Cap the ROD states that; "The key element of this interim remedy is to determine its effectiveness before implementing other remedial actions. The monitoring data gathered before and after installation of the clay cap will be evaluated to determine the effectiveness of this interim remedy." Section V Additional Studies states that; "The additional studies will include fish bioassay work for the on-site and off-site ponds and the river. Indicator parameters will be selected from the volatiles, PAHs and inorganic constituents. In addition, general toxicity tests will be performed on the river to determine if ammonia or other constituents in the ground water cause a toxic effect on the aquatic environment."

Monitoring as stated in the ROD clearly spells out minimum goals, objectives, and requirements. The Consent Decree in Paragraph VII (D) (7) itself requires that the groundwater "Monitoring shall continue for a period of at least 30 years after the construction of the cap is complete, unless it can be demonstrated to the U. S. EPA's satisfaction that further monitoring is not necessary." No criteria are established in the Consent Decree to satisfy what will demonstrate that further monitoring is not necessary. For any criteria at all one must look to the RAP.

The RAP (Appendix B) contained in the proposed Consent Decree was prepared for the Marion/Bragg Dump Generator Defendant Group by their technical consultant Environmental Resources Management, Inc. (ERM). The ERM RAP fails to meet the goals, objectives, and requirements of the ROD. The ERM RAP fails to meet all of the requirements of Section 121 or Section 122 of SARA. Specifically the ERM RAP precludes objective analysis of monitoring data as demonstrated in Section 2 Objectives which states; "The ground water data gathered before and after the installation of the cap will be evaluated to show the effectiveness of this remedy." and; "The selected interim remedy may become the "final" remedy, if it is determined that no environmental or human health impact results from the continued release of ground water to surface receptors."

This is clearly not the goal stated in the ROD, which is to <u>determine</u> the effectiveness of the interim remedy. The ERM RAP seeks to "show" effectiveness by preconditioning monitoring and additional studies required in the ROD with the net result which will determine that no environmental or human health impact results from the continued release of ground water to surface receptors. This conclusion is further based upon the following:

In Section 3.4 Landfill Cover/Cap the ERM RAP states that; "In conjunction with the regrading and construction of the landfill cap, uncovered or protruding waste and contaminated leachate seeps and sediments which were identified in the RI/FS will be removed and/or covered by the cap in the course of regrading. Liquid hazardous materials contained in drums which are encountered will be removed and disposed of at an approved site." This is not the requirement of Section V Sanitary Landfill Cover (clay cap) of the ROD which clearly states that; "Any drums or other hazardous wastes, if present, would be removed, analyzed and disposed according to RCRA requirements. If regrading fails to eliminate the seeps, then seep collection would be required." In addition to redefining hazardous wastes into "liquid hazardous materials", the Consent Decree and ERM RAP have no provisions for leachate seep collection should the clay cap fail to eliminate the seeps. No characterization of on-site wastes or soils as required by the ROD and SARA were performed during capping of the Facility.

Section 4 Monitoring and Additional Studies of the ERM RAP states; "The objective of this effort is to perform the necessary tasks to effectively monitor ground water, to determine existing surface water quality in the vicinity of the landfill, and provide documentation of the success of the proposed remedy." The ROD does not require "documentation of the success of the proposed remedy" but rather requires determination of the effectiveness of the proposed remedy.

Section 4.1 Ground Water Monitoring of the ERM RAP states; "there is no potential for contamination of shallow private-use wells located upgradient from the landfill on the site." and; "To confirm the RI conclusion that the impacts of contaminants from the upper aquifer on the Mississinewa River are minimal, additional ground water monitoring will be conducted as part of this remedy." The RI and ROD clearly do not make these conclusions, as stated previously, the impacts are not known and require additional monitoring and studies, as necessary, to adequately determine the Facility's full impacts, including bioaccumulation and general toxicity.

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Section 4.1.1 Existing Ground Water Monitoring Network of the ERM RAP states; "In order to provide a more site-specific monitoring well network for monitoring to be conducted as part of the remedial action, it is proposed that the existing shallow monitoring wells will be sealed and abandoned and replaced with 10 new monitoring wells." New well are not specifically called for in the ROD, however, because many of the existing wells are in areas where the landfill cap is to be installed the existing wells have been abandoned. As previously stated, the ROD requires in Section V that; "The existing leachate wells and the off-site pond will also be sampled occasionally." This requirement of the ROD is now impossible to meet and in itself constitutes a Significant Change from the ROD which is now embodied in the Consent Decree.

Section 4.1.3 Proposed Ground Water Monitoring Network of the ERM RAP states that; "The proposed locations of 10 new monitoring wells were selected with consideration of the following factors: Well installation should not be installed through buried wastes; The site has a relatively homogeneous upper aquifer, and site geology is relatively simple; and The upper aquifer discharges to the Mississinewa river. Eight of the ten proposed shallow monitoring wells will be installed on the landfill property downgradient from areas of waste disposition (source area) and upgradient from the Mississinewa River." The ROD in Section II (D) (3) (a) Ground Water Contaminants and Pathway of Exposure states;"Thirteen wells were drilled around the site perimeter, eight of the wells were drilled through the landfill. Since this site borders the river, there is no plume or downgradient area to sample except for the river. Therefore, the monitoring wells had be to drilled through the fill material and screened in the aquifer below." Initial testing done on the new wells in February, 1990 was complicated by sediment in the samples (usually an indication of improper well development) which may invalidate the results. The sample results still have not been made available to the State or public in eight months since the sampling event resulting in an undue analytical turn-around time. Clearly the information presented in the ROD conflicts with the considerations of the ERM RAP. In addition the evaluation of groundwater data gathered before and after the installation of the cap will be performed on data from completely different monitoring points. No provisions for this comparison of apples and oranges is available in the ERM RAP or Consent Decree. This fact is important, the ROD in response to a Generator Defendant's technical comment, Section 3, Comment 11 states the EPA Response which points out that; "...because the ground water investigation was conducted beneath the source material and there was significant variability in the concentrations detected." Variability in the new monitoring well results from the existing data should not be used in evaluations determining the effectiveness of the proposed remedy with our accounting for the considerations outlined above.

The ERM RAP differs in the length of Monitoring time. While the Consent Decree requires 30 years of monitoring, the ERM RAP states in Section 4.1.4 Monitoring Well Construction that; "Depth to water measurements will be taken on a monthly basis from the monitoring well network for a minimum of three months and quarterly thereafter for the remainder of the year." One year does not meet the requirements of the Consent Decree or the ROD. In Addition the ERM RAP Proposed Groundwater Sampling Schedule Figure 4-3 indicates a Final Sampling Event 5 years from the date when Capping Started. Figure 4-3 of the ERM RAP clearly does not meet the goals, objectives, or requirements of the Consent Decree or the ROD and is inadequate, improper and/or inappropriate.

Section 4.1.5 Ground Water Sampling of the ERM RAP states; "Upon receipt of the first round of ground water analytical results, an evaluation of the data will be performed to establish a list of indicator parameters for semi-annual sampling as part of the selected remedy (Figure 4-3). The ROD in Section V Monitoring states that; "Priority pollutant analysis will be conducted on a semi-annual basis. Parameters at various locations requiring confirmation will be resampled on the alternate quarter. Selected indicator parameters will be included in the analysis every quarter." Once again the ERM RAP fails to meet the requirements of the ROD.

Section 4.1.5 Ground Water Sampling of the ERM RAP further states; "As part of evaluating the data, analytical results from the downgradient monitoring wells will be compared to appropriate standards and upgradient water quality. If standards are exceeded, then the actions discussed in Section 5 will be followed. These subsequent actions will include the averaging of results of water quality analysis for monitoring wells from each zone."." Comparison to undefined appropriate standards is not adequate, comparison must be made to any applicable or relevant and appropriate standards as required by the ROD and Section 121 or Section 122 of SARA. "Subsequent actions" which "include the averaging of results of water quality analysis for monitoring wells from each zone" are totally inconsistent with the goals, objectives, and requirements of SARA and the ROD. The ROD clearly states in Section IV (B) Alternative 1 that; "If protective levels are exceeded then additional remedial actions would be indicated;" and in Section IV (C) Evaluation Summary that; "If action levels are exceeded, groundwater pump and treat or other active protective actions will be required." The ROD or any other applicable or relevant and appropriate requirements or laws do not allow the averaging of results of water quality analysis for monitoring wells. This provision of the ERM RAP is inappropriate, inadequate, and/or improper. The actions "discussed in Section 5" do not meet the requirements of the ROD or SARA and will be discussed subsequent to this section.

Finally, Section 4.1.5 concludes with the statement; "Should the ground water quality remain relatively consistent over time, monitoring may not need to be as extensive and may be reduced after review by the EPA and IDEM." Averaging of results will ensure consistency and is designed to meet the goals and objectives of ERM and the Generator Defendants of "showing" no impact from the Facility rather than measuring and determining the true effects from the Facility.

Section 4.2 Surface Water Sampling and Analysis of the ERM RAP states; "The objective of the surface water sampling and analysis program will be to determine whether surface waters are being impacted by the landfill at levels above appropriate standards;" and that; "The criteria to be used for evaluation of ground water and surface water are discussed in Section 5 - Decision Tree for Future Studies." This Section does not meet the requirements of SARA or the ROD. Criteria and standards must meet applicable or relevant and appropriate requirements or laws and satisfy the previously stated goals, objectives, and requirements of the ROD including adequate and appropriate bioaccumulation and general toxicity evaluations. The ERM RAP as an element of the proposed Consent Decree fails to meet this criteria in its present form.

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NOTE: The proposed Surface Water Sampling Locations included in Figure 4-4 of the ERM RAP include a sample point downstream of the Marion/Bragg Dump on an island removed by the Army Corps of Engineers and Grant County Commissioners during the summer of 1990.

Section 4.4 Parameters for Analysis of the ERM RAP state that; "The basic parameter list consists of the U. S. EPA priority pollutant compounds less pesticides and PCBs;" and that; "The semi-annual parameter list may be reduced to a list of site-specific indicator parameters once sufficient data base is developed." The ROD in Section V Monitoring states that: "Priority pollutant analysis will be conducted on a semi-annual basis." This includes PCBs and pesticides. In fact PCBs were detected in the Remedial Investigation (RI), but the results were invalidated due to improper quality control/quality assurance (QA/QC). Resampling for PCBs did not take place. The language of Section 4.4 does not comply with Section 121 or Section 122 of SARA including all applicable or relevant and appropriate requirements or other laws. The ROD requires priority pollutant analysis and has no provision for reduction of testing parameters as called for in Section 4.4 of the ERM RAP. The U. S. EPA response to Generator Defendant Comment 15. in the ROD states; "Three borings are not representative of the entire landfill contents." Reduction of parameters should not be allow because of variability in the Marion/Bragg Dump's contents and that waste constituents may vary over time due to on going processes within the dump.

Section 4.5 Bioaccumulation Studies of the ERM RAP state that; "The accumulation of xenobiotics (substances not required for normal metabolism) is of concern, since the tissue concentrations can reach elevated levels high enough to cause damage to the organism or to subsequent consumers, including humans." Section 4.5 further states that; "Inorganics also can bioaccumulate. A decision methodology for bioconcentration work is presented in Figure 4-5." The ROD does not precondition the conducting of these studies for "further study the nature of groundwater contamination on fish consumption and potential impacts to aquatic life and the environment" but rather requires them to be conducted "Concurrent with the implementation of the interim measures". Section 4.4 and 4.5 of the ERM RAP do not meet the requirements of the ROD or comply with Section 121 or Section 122 of SARA including all applicable or relevant and appropriate requirements or other laws.

In Section 4.5.1 Does a Compound Have Significant Bioaccumulation Potential? the ERM RAP once again attempts to limit parameters and also sampling sites. Section 4.5.1 states that; "Any compound not passing the decision criteria will be considered for bioaccumulation studies in the Mississinewa River fish populations." The ROD clearly requires bioaccumulation studies for the on-site and off-site ponds in addition to the Mississinewa River. Section V Additional Studies of the ROD states; "The additional studies will include fish bioassay work for the on-site and off-site ponds and the river." Section 4.5.1 further states that; "The basic parameter list for analysis will consist of U.S. EPA priority pollutant compounds less pesticides and PCBs. The list may include other parameters if indicted by ground water and site sediment analysis." The ROD in Section V Additional Studies states that; "Indicator parameters will be selected from the volatiles. PAHs and inorganic constituents." This includes PCBs and pesticides. The fact PCBs were detected in the Remedial Investigation (RI), but sample results were invalidated due to improper quality control/quality assurance (QA/QC) should not affect the requirements of the ROD since resampling for PCBs did not occur. The language of Section 4.5.1 does not comply with Section 121 or Section 122 of SARA including all applicable or relevant and appropriate requirements or other laws. The ROD requires indicator parameters selected from the volatiles, PAHs and inorganic constituents and has no provision for reduction of testing parameters as called for in Section 4.5.1 of the ERM RAP.

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NOTE: Figure 4-5 of the ERM RAP would select PCBs for evaluation if found to be site-related... see RI PCB analysis which was discarded for QA/QC...

In Section 5 Decision Tree for Future Studies the ERM RAP states that; "The objective of the additional studies is to perform the necessary tasks to ensure that no unacceptable threat to human health or the environment results from conditions in the on-site pond or the discharge of site-related groundwater to the Mississinewa River. These additional studies are intended to complete the investigation of the on-site pond and ground water operable units, as specified in the EPA and IDEM Record of Decision. Two types of studies are deemed appropriate for meeting these objectives: biological survey studies (on the Mississinewa River) and water quality studies (ground water, on-site pond, off-site pond, and Mississinewa River)." As previously stated, Section V Additional Studies of the ROD states; "The additional studies will include fish bioassay work for the on-site and off-site ponds and the river." This Section clearly does not meet the goals, objectives, or requirements of the ROD or SARA. Biological surveys do not ensure that no unacceptable threat to human health or the environment results from conditions in the on-site pond or the discharge of site-related groundwater to the Mississinewa River. The ROD under Section II (D) (2) (b) states that; "the difficulty with the water quality criteria is that many of the inorganic constituents have levels set for protectiveness of either the aquatic life or human consumption which are well below analytical detection limits. Therefore, it is conceivable that bioaccumulation could be occurring either from the sediments or the water, which is not evident based on existing data. Bioassay work is needed to determine if a risk is present to human health from this surface water/sediment pathway."

Section 5 Decision Tree for Future Studies the ERM RAP further states; "A decision methodology for additional water quality studies and biological survey is presented in Figure 5-1." As required in ERM's RAP Figure 5-1 Water Quality Studies Decision Tree in order to reach a point of evaluation of the Remedial Actions the criteria requires that the ground water must first fail current Water Quality Standards, then fail the Biological Survey, then fail derived Allowable Loading for discharge of pollutants into the Mississinewa River, otherwise no further studies are necessary. No mention of the bioassay studies are made. These preconditions are absent from the ROD. Additional studies are to be performed by the U. S. EPA and/or Generator Defendants "as necessary" in order to meet all applicable or relevant and appropriate requirements and other laws including the goals, objectives, and requirements of the ROD.

The ERM RAP in Section 5 Does Ground Water Currently Meet Surface Water Quality Standards? states that: "The results of the sampling of ground water wells will provide an average concentration of site-related contaminants in ground water discharging from the site. These concentrations will be compared to applicable federal and Indiana State water quality standards, where applicable;" and that; "If current levels of siterelated compounds in ground water meet these standards, no further action will be necessary; dilution as it occurs may be considered as an additional "safety factor"." "If current levels of site-related compounds in ground water do not meet surface water quality standards, a biological survey of the river will be conducted.\* This Section is written in total disregard of the requirements of the ROD or Section 121 and/or Section 122 of SARA. Monitoring well results cannot be averaged under any applicable or relevant and appropriate requirements or other laws pertinent to the Facility. Further more, the ROD clearly states what must take place should applicable or relevant and appropriate standards be exceeded. Section IV (B) Alternative 1 of the ROD clearly states that; "If protective levels are exceeded then additional remedial actions would be indicated." And the ROD states in Section IV (C) Evaluation Summary that; "If action levels are exceeded, groundwater pump and treat or other active protective actions will be required. The ROD requires specific actions if standards are exceeded, not further study embodied as a biological survey!

Additionally, the statement that; "If current levels of site-related compounds in ground water meet these standards, no further action will be necessary; dilution as it occurs may be considered as an additional "safety factor"" does not meet the requirements of the ROD or SARA. The ROD requires additional studies to "further study the nature of groundwater contamination on fish consumption and potential impacts to aquatic life and the environment". This includes bioassay and general toxicity studies. Further more, dilution of the dump contaminants by the river increases both the mobility and the volume of pollution and fails to meet the goals, objectives, and requirements of SARA.

Section 5 Biological Survey of the ERM RAP States that; "The biological survey will consist of species counts and calculation of some measure of diversity upgradient from, downgradient from, and adjacent to the site. If no significant difference is shown, it can be assumed that conditions are not degraded due to site-related discharges, and no further action will be necessary. If significant degradation due to site-related

discharge is shown to occur in the river, remedial measures will be evaluated. If there is no significant degradation due to site-related ground water discharge then Allowable additional loads fro site-related compounds will be developed as discussed in the following section. The biologic survey will be limited to the benthic (animals living in or on the river substrate) macroinvertebrates (animals not passing through a 0.5 mm mesh)." The terms "some measure of diversity" are inadequate and appropriate. Specific criteria must be applied to perform proper and correct evaluation of data. The assumption that "conditions are not degraded due to site-related discharges, and no further action will be necessary" upon a finding of "no significant difference" is contrary to requirements of the ROD such as additional studies to "further study the nature of groundwater contamination on fish consumption and potential impacts to aquatic life and the environment". This includes bioassay and general toxicity studies. The ROD under Section II (D) (2) (b) states that; "it is conceivable that bioaccumulation could be occurring either from the sediments or the water, which is not evident based on existing data. Bioassay work is needed to determine if a risk is present to human health from this surface water/sediment pathway." A biological survey is no substitution for a bioassay study. In addition the ROD requires study of fish and human consumption of fish and is not limited to benthic macroinvertebrates which may or may not bioaccumulate site related contaminants to measurable levels or effects.

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In Section 5 Calculation of Allowable Loads to River the ERM RAP calls for the setting of standards to "Allowable additional loads for site-related compounds" which will be back-calculated for the discharge of site-related ground water. This Section further states that; "These calculated allowable loads will become the standards for ground water discharge, and subsequent sampling will monitor satisfaction of these criteria. If these criteria are satisfied, no further action is necessary. If these criteria are exceeded, or if standards are not currently met upgradient in the river from the site, remedial actions will be evaluated (Figure 5-1)." Additional monitoring and studies are still required, as necessary to meet the requirements of the ROD and SARA. Standards and criteria must meet any applicable or relevant and appropriate requirements or other laws pertinent to the Facility including the Indiana Water Quality Standards and/or NPDES requirements for the discharge of site related groundwater.

Contrary to the statement of Section 6 Conclusions of the ERM RAP that; "The elements of the remedy, including ground water monitoring and additional studies, proposed for the Marion (Bragg) Landfill are fully consistent with the requirements of the Record of Decision issued by the EPA and IDEM on 30 September 1987 to the Group," the ERM RAP does not meet the goals, objectives and requirements of the ROD or SARA. The DOJ should find Appendix B of the proposed Consent Decree, the RAP, inappropriate, improper and inadequate in view of the clearly stated requirements of the ROD and applicable or relevant and appropriate requirements or laws including the pertinent Sections of SARA until such time as it has been effectively modified to meet these minimum requirements.

No notice(s) of Significant Change have ever been issued by U. S. EPA in the above referenced matter concerning the Marion/Bragg Dump CERCLA site.

Clearly changes such as non-compliance with ARARs identified in the ROD and the disregard of requirements of Indiana Department of Environmental Management regulations do not meet all of the requirements of Section 121 or Section 122 of SARA. Meaningful public comment on such changes without the information required in a notice of Significant Change is a direct impediment to the public comment process.

These Significant Changes result from negotiations subsequent to signing of the initial proposed Consent Decree and have developed conditions which may lead to the selected Interim Remedy becoming the "Final Remedy". The ERM Remedial Action Plan is designed to avoid possible remedial action beyond a clay cap, a fence, and flood control. The ERM Remedial Action Plan proposes to average monitoring well results in assessing site impacts and uses vague language for groundwater and surface water standards in lieu of defined limits. Additional studies required in the Record Of Decision including bioassay studies are now contingent upon preconditions and evaluation of skewed or averaged data. The results of a biological survey, of which one conducted by the U.S. EPA in 1989 has concluded no impact from the site would now preclude the chance of additional studies or evaluation of remedial actions ever being done. The 1989 biological survey study could not conclude any attributable impact to the site because of current impact upon the Mississinewa River upstream. Properly designed and carefully conducted bioassay and general toxicity studies could effectively determine site specific impacts. Assessment of site-related impacts or risks is suspect since when standards or criteria are exceeded, monitoring data will be massaged through statistics and geometric means rather than the use of individual maximum concentrations for contaminates.

The proposed Consent Decree exceeds the statutory authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). Paragraph XIX (G) of the proposed Consent Decree states that; "The United States and the State agree that, pursuant to Section 113 (f) (2) of CERCLA, 42 U.S.C. Section 9613 (f) (2), so long as the Settling Defendants are in compliance with this Consent Decree and after termination hereof, the Settling Defendants shall not be liable to persons not Parties to this Decree for claims for contribution regarding the Work or any other matters covered by this Consent Decree." The language of this subsection of the proposed Consent Decree is overly broad and exceeds the statutory requirements. The requirements of Section 113 (f) (2) of CERCLA, 42 U.S.C. Section 9613 (f) (2) speak only to rights of contribution and do not release the Settling Defendants from liability to "persons not Parties" to the proposed Consent Decree for "any other matters covered" by the proposed Consent Decree. Paragraph XIX (G) of the proposed Consent Decree is inappropriate, improper and inadequate and does not comply with the law, specifically Section 113 (f) (2) of CERCLA, 42 U.S.C. Section 9613 (f) (2).

Section 121 (d) (2) (A) of CERCLA, 42 U.S.C. Section 9621(d) (2)(A) requires that; "With respect to any hazardous substance, pollutant or contaminant that will remain onsite, if— (ii) any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent... is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and

appropriate under the circumstances of the release or threatened release... shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation." The proposed Consent Decree and its incorporated elements and Appendices do not meet all of the requirements of this Subsection for example, the Remedial Action Plan. Therefore as currently drafted the proposed Consent Decree is inappropriate, improper and inadequate and does not comply with the law.

Section 121 (d) (2) (B) (ii) of CERCLA, 42 U.S.C. Section 9621(d) (2) (B) (ii) states that; "For the purposes of this section, a process for establishing alternate concentration limits to those otherwise applicable for hazardous constituents in groundwater under subparagraph (A) may not be used to establish applicable standards under this paragraph if the process assumes a point of human exposure beyond the boundary of the facility, as defined at the conclusion of the remedial investigation and feasibility study, except where— (I) there are known and projected points of entry of such groundwater into surface water; and (II) on the basis of measurements or projections. there is or will be no statistically significant increase of such constituents from such groundwater in such surface water at the point of entry or at any point where there is reason to believe accumulation of constituents may occur downstream; and (III) the remedial action includes enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into surface water then the assumed point of human exposure may be at such known and projected points of entry."

The proposed Consent Decree seeks provisions in the Record Of Decision and Remedial Action Plan (Consent Decree Appendices A and B respectively) to establish Alternate Concentration Limits (ACLs). This Section of CERCLA is contingent upon the remedial action including enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into surface water. The Record Of Decision states that; "This approach assumes a land use restriction is enforceable;" and that; "Long-term enforcement of site access and deed restrictions" are "uncertain." In addition the proposed Consent Decree requires fencing of the site perimeter as shown in Appendix C, the fence currently installed at the Facility does not conform the the designated boundary of Appendix C. The Facility is currently accessible in areas along the Mississinewa River some of which are wide area of access. Exposed wastes and leachate have been observed and photographed outside the "perimeter" fencing. The provisions of Section 121 (d) (2) (B) (ii) of CERCLA, 42 U.S.C. Section 9621(d) (2) (B) (ii) are not and have not been complied with. The proposed Consent Decree with incorporated or related elements and Appendices is s inappropriate, improper and inadequate and does not comply with the law. ACLs must not be established for the Facility until full compliance with the goals, objectives, requirements and criteria of Section 121 (d) (2) (B) (ii) of CERCLA, 42 U.S.C. Section 9621(d) (2) (B) (ii).

The integrity of the Facility is questionable as the boundaries of waste disposal still are not completely defined. In the Spring of 1990, additional landfill material was unearthed along the river bank due to heavy rains knocking down trees along the river. A July, 16 1990 Monthly Report from Richard A. Markwell, Area Engineer, U. S. Army Corps of Engineers states; "The severe weather noted in paragraph 2D unearthed additional landfill materials along the river bank. This additional debris was not anticipated and will result in extensive work along the river to clean up the debris as well as provide protective cover and erosion control." Additional modifications will now result due to this "discovery" that portions of the landfill due indeed make up sections of the river bank. The public, City of Marion, IN, and State of Indiana have yet to be informed of details of the required modifications in the current Remedial Action and thus cannot comment on them. These findings may warrant modification of the Consent Decree and/or Record Of Decision. <u>Under SARA a ROD may be reopened and</u> amended because of new information discovered or difficulties encountered during the design and remedial action. For example: remedial cleanup was stopped at the Conservation Chemical Co. Kansas City, Missouri site and at the Re-Solve, Inc., North Dartmouth, Massachusetts site when new information about the sites' contamination showed a need for more studies, another ROD, and new cleanup strategies.

Under the proposed Consent Decree here is no significant analysis of the long-term uncertainties and possible failures of the containment and capping aspects of the Remedy. Under SARA an analysis is required of potential failure of containment/land disposal techniques such as a RCRA or clay cap. Considering the proximity of the site to both surface and groundwater, this lack of analysis is a major shortcoming of the Consent Decree and selected remedy. The potential will always exist for the movement of unstabilized wastes on-site. Many uncertainties weaken the claim that the selected remedy is cost-effective, the selected remedy—with its comparable uncertainties—will not offer the same overall level of long-term environmental protection. Therefore, regardless of cost, it will not be cost-effective as required under SARA and the National Contingency Plan (NCP).

The selected Interim Remedy does not prevent groundwater contamination or its' migration off-site. This is especially significant due to the possibility of the "Interim" Remedy becoming a "Final Remedy". Statements such as; "dilution, as it occurs, may be considered as an additional safety factor", is contrary to the intent of the Superfund Amendments and Reauthorization Act (SARA). The proposed Consent Decree should include a plan designed to direct remediation to definite standards while taking into account long-term groundwater monitoring for slow migration of leachate, water table fluctuation, and the future release or potential release from buried drums and unknown wastes into the groundwater.

As now planned, the delay in monitoring results which should measure the effectiveness of the Interim Remedy rather than "show the effectiveness of the remedy" and the adapting of current results to convenient "standards" thus skewing results via averaging is tantamount to playing with the data and risking the public's health. The development of procedures for the handling of these monitoring results out of the public's purview and after the signing of the initial proposed Consent Decree offers no meaningful ability for public, City, or State comment.

Whether the proposed Consent Decree is appropriate, proper, and/or adequate is questionable because: if different and readily available technical information had been used, the Consent Decree would change significantly. Under the proposed Consent Decree site sampling may be insufficient to detect hot spots of contamination that would facilitate using limited treatment to cut cleanup costs and groundwater monitoring may not be reliable. Recent EPA research ("A Comparison of Ground Water Monitoring Data From CERCLA and RCRA Sites" Ground Water Monitoring Research, fall 1987, pp. 94-100) has found that; "Low sampling frequency coupled with the generally smaller sampling networks suggest that efforts to characterize groundwater contamination at [Superfund] sites may be inadequate.

Since under the proposed Consent Decree wastes are to be left in the ground and in the groundwater permanence may be claimed even when technical factors suggest a high probability of failure, that is, of release of hazardous substances, and of another cleanup. In fact the ROD states that; "The Marion/Bragg Landfill has a portion of the waste saturated within the upper aquifer. This water table aguifer will fluctuate up and down within the waste as dictated by seasonal hydrologic conditions. This fluctuation was noted in the RI. Although it is clear that reducing infiltration will reduce leachate generation, the low concentration of ground water contamination may be more influenced by seasonal fluctuations in the water table/waste saturation interface. Therefore, the zero infiltration provided by the RCRA cap will not likely result in a commensurate reduction in existing ground water concentrations." Thus a clay cap will have even greater unlikelihood in achieving a commensurate reduction in existing ground water concentrations. The proposed Consent Decree would be more credible if it acknowledged the remedy as impermanent and defended it on its own merits relative to truly permanent alternatives. An impermanent interim remedy and a false sense of security can lead to land use that will complicate future cleanup and pose unacceptable risks. Impermanent technologies are not cost-effective remedies and do not satisfy the requirements of SARA and the NCP.

The proposed Consent Decree does not provide specific technical criteria for subsequent decisions, such as groundwater cleanup or land use, nor are there necessarily assurances of independent validation of data and effective EPA oversight of activities by Settling Defendants and contractors. Lack of detail can result from poor contractor performance, lack of adequate oversight, and attempts to carry out activities after the ROD when there is less public scrutiny. Conflicts of interest are also a problem as in the case of PRP parent corporation subsidiaries are both PRPs and contracted to perform remedial actions at the Facility (Central Waste Systems, Inc. and Chemical Waste Management, Inc. are both Waste Management Inc. subsidiaries)

Under the proposed Consent Decree the interim remedy can be deemed complete by EPA even though significant contamination remains on-site or migrates off-site. Hazards, the source of the risk(s), will not be eliminated through permanent technologies but exposures to the hazard (the risk) will be reduced through impermanent actions, such as capping the site, or institutional controls, such as deed restrictions which have uncertain future implementation.

The important feature of the proposed Consent Decree and selected remedy is that it does not directly deal with the buried wastes, contaminated soil, and contaminated groundwater on-site. The selected remedy leaves a very large amount of untreated hazardous material on the site. The only treatment method which would meet the environmental protection goal under the requirements of SARA of permanent removal or detoxification of contaminates is excavation followed by soil treatment. {This was not considered as an alternative treatment technology.} This type of treatment is a separation technology which would produce concentrated residues which would require proper reclamation, treatment, or management to meet the goals of SARA and RCRA.

The Consent Decree and its Appendices fail to identify and remediate on-site oil and gas wells as identified in the Remedial Action Master Plan (RAMP) by CH2M Hill on a May 16, 1983 site visit and which are displayed on an Indiana Geological Survey Petroleum Exploration Map PEM82A and other maps in the possession of the Indiana Geological Survey. Thes maps show, at a minimum, four abandoned oil and gas wells on the Facility's premises. Gas wells in the Marion area operated approximately from 1887 to 1915, most of which were improperly abandoned and now serve as direct connections to the various aquifers through which they were drilled. The applicable or relevant and appropriate requirement to close out and properly abandon all unused wells on-site has not been met and will not be met until all on-site wells have been identified and properly plugged and abandoned in accordance with Indiana Department of Natural Resource regulations.

The City of Marion's liability under operating and maintenance costs as a named and settling Potential Responsible Party (PRP) are potentially open ended and already have been significantly increased since the signing of the initial proposed Consent Decree, the requirements of SARA have not been met in considering these costs which are still undefined. Once again, critical information concerning details of the current Remedial Action and the extent of the City's liability have not been made available. Due to the lack of information, meaningful and informed comments on these details of the proposed Consent Decree cannot be made by the public, City of Marion, and State of Indiana.

In general, the proposed Consent Decree sets a bad precedent and will continue the Marion/Bragg Dump legacy of one bad decision after another. The selected remedy is controversial in its' effectiveness, having been ranked by seven national environmental organizations as one of the ten worst Record of Decisions made by U.S. EPA in 1987. The report entitled Right Train, Wrong Track... made the following findings based on the ROD: "The Marion/Bragg Landfill, located adjacent to the Mississinewa River, contains approximately 1.1 million cubic yards of waste. Groundwater beneath the site discharges to the river. Primary contaminants of concern include: TCE, vinyl chloride, and other volatile organic and metals compounds. An on-site pond at the site, although no longer stocked for recreational fishing, is still used occasionally by area residents, principally teenagers. This pond continues to receive waste seepage in excess of federal water quality criteria. Fish from the pond have not been sampled."

Right Train, Wrong Track...(continued)...

"RCRA hazardous waste land ban deemed inapplicable because wastes will be redisposed on site, a position without legal or common sense basis. Wastes also redisposed in inadequate landfill that does not comply with federal hazardous waste design standards." "Taking noncompliance with RCRA a step further, the Marion/Bragg, Indiana and Schmalz Dump, Wisconsin sites fail to include both RCRA liners and RCRA-approved caps. The Marion/Bragg site ROD takes the position that since groundwater is already running directly through the on-site wastes (and presumably, already leaching contaminants off-site) an imperfect cap will not cause significant additional leaching of contaminants. Yet it fails to require either slurry walls to contain this groundwater running through the wastes or groundwater extraction wells to treat the contaminated water. Rather three new private wells are provided, and EPA is monitoring the situation." Land Ban Requirements are Generally Ignored. "For example, the Marion/Bragg Landfill ROD makes the following completely unfounded statement: "(S)ince waste from regrading will be consolidated on-site, RCRA land ban requirements will not be triggered." This position has no support in RCRA or CERCLA. The land ban restrictions are clearly applicable to Superfund cleanups that involve land disposal of wastes at the site. Whether this disposal takes place on or off the original site is irrelevant. Land disposal of solvent wastes at Marion/Bragg is of particular concern given that four percent of the on-site wates are perennially saturated in the upper acquifer, which discharges to the nearby Mississinewa River. Surely, the land ban was meant to address land disposal situations such as Marion/Bragg, where land disposal of solvent wastes is contributing to pollution of a nearby river." There will be no treatment of the source of contamination at Marion/Bragg Landfill.

The proposed Consent Decree will leave contaminated groundwater and surface water on-site. The selected remedy leaves a very large amount of untreated hazardous material in place resulting in release of hazardous substances continually. The contaminated aquifer and on-site pond will act not unlike a waste-storage lagoon. RCRA requirements have not been met under the proposed Consent Decree and Appendices. The 1982 Indiana Department of Natural Resources Geological Survey Special Report 23 Environmental Geology of Grant County, Indiana an Aid to Planning indicates geologic conditions at the Facility (Marlon/Bragg Dump) which are unsuitable for both sanitary landfill or waste-storage lagoon purposes.

The proposed Consent Decree fails to address all applicable or relevant and appropriate requirements as required under SARA Section 121 or Section 122. In responding to Generator Defendant's Comment 4 on the ROD, the U. S.EPA's response indicates that; "The river bank is one half mile long on the site border. Ground water quality will change because waste type and characteristics will change. In order to be protective, EPA recommended monitoring appropriate "discharge zones" (page 6-7)." The applicable or relevant and appropriate requirements of Section 402 of the Clean Water Act, State of Indiana Industrial Waste Water Pretreatment and/or NPDES programs should apply and be met for all groundwater discharges through "discrete conveyances" such as identified "discharge zones" into navigable waters of the United States or State of Indiana. These requirements should also apply to any and all identified leachate seeps discharging into the navigable waters of the United States or State of Indiana. Leachate seeps have been identified along the river.

The proposed Consent Decree and Appendices such as the ERM RAP attempt to limit executive discretion of the U.S. EPA and U.S. Fish and Wildlife Service) in commencing an action for natural resource damages by jeopardizing the period in which such an action may be brought. Pursuant to 42 U.S.C. Section 9613 (g), an action for natural resource damages must be commenced within three years after the completion of the remedial action. The proposed Consent Decree as now drafted will allow the Settling Defendants to submit a Notice of Completion and U. S. EPA to issue a Certification of Completion with findings that; "conditions are not degraded due to site-related discharges, and no further action will be necessary" base upon an inadequate and in appropriate biological survey. The ROD and other applicable or relevant and appropriate requirements call for a complete site assessment to determine the Facility's true impacts. As noted a finding no natural resource damages may be concluded even though disturbances in the river in the summer of 1990 will result in years for the area to return to normal, thus potentially resulting in false findings based on the ERM RAP's biological survey. A March 2,1990 letter from Mr. Bernard J. Schorle, Remedial Project Manager, U. S. EPA Region V, to Mr. Mark Travers, de maximis, Inc., states; "I also talked with T. Simon regarding the removal of the sandbar from the river north of the site. I assume that he knew which sandbar I was talking about. He estimated that it might take two or three years for the area to return to "normal". Actions for natural resource damages should be commenced with in the required times and be base on appropriate and adequate site impact assessments commenced concurrent with the implementation of the interim remedy as required by the Declaration for the Record Of Decision.

The proposed Consent Decree is inappropriate, improper, and/or inadequate and should be withheld or modified until such time as all reasonable State and public comments and concerns have been addressed and satisfied. The Indiana Department of Environmental Management's (IDEM) comments on elements of the Consent Decree, Appendices and related technical work documents have largely gone unaddressed by the United States Environmental Protection Agency (U. S. EPA) and the Generator Defendants.

As now drafted the proposed Consent Decree will ensure that the interim remedial actions become the Final Remedy for this site. The proposed Consent Decree embodies "Significant Changes" from the Record Of Decision (ROD) of September 30, 1987. The proposed Consent Decree exceeds the statutory authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The proposed Consent Decree does not meet the goals, objectives and requirements of the ROD and is inconsistent with all of the requirements of SARA.

Thank you for your consideration of these written comments,

Respectfully,

Larry Davis, for USWA Local # 6786, HEC, PAHLS, and HEAL.

Selected State of Indiana Comments Requiring Further Consideration & Action...



# United States Department of the Interior



FISH AND WILDLIFE SERVICE

BLOOMINGTON FIELD OFFICE (ES)
718 North Walnut Street
Bloomington, Indiana 47401
(812)334-4261

August 25, 1989

Bernard Schorle, RPM
U. S. Environmental Protection Agency
Indiana Site Management Unit (5HS-11)
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Schorle:

Thank you for sending us a copy of the September 1987 Record of Decision (ROD) the Marion-Bragg Landfill, Marion, Indiana. Based on the July 14, 1989 telephone conversation between yourself and Dan Sparks of my staff, review of the Remedial Investigation/Feasibility Study (RI/FS), review of the ROD, and visit to the site, we would like to offer the following comments. These comments are of a technical assistance nature only and do not necessarily reflect the views of the Department of the Interior.

Our concerns stem from the valuable fish and wildlife habitats in and adjacent to this site. The on-site pond and the river provide suitable feeding and resting habitat for many species of migrating waterfowl. Many piscivorous birds (including belted kingfisher and herons) are expected to be found in this area. This site is within the range of the federally endangered Indiana bat (Myotis sodalis) and the forested banks of the Mississinewa River likely provide suitable foraging habitat.

The selected remedy for the site, as described in the 1987 ROD includes: capping the landfill, providing flood control measures, restricting access, providing new drinking water wells to those affected by the site, and monitoring the groundwater to determine the effectiveness of the interim remedy. On pages 16 and 17 of the ROD monitoring of the interim remedy was expanded to include: 1) quarterly sampling surface waters at 3 on-site pond locations and 5 river locations; 2) additional studies consisting of fish bioassay work for on-site and off-site ponds and the river; and, 3) general toxicity tests on river ammonia levels. Based on information we received during the July 14, 1989 telephone conversation, the additional studies as described above probably will not be done.

It does not appear that the selected remedial actions will be adequate to protect the environment. Although an impervious cap will reduce percolation through landfilled wastes, runoff into the onsite pond will serve to recharge the local shallow aquifer which flows through a portion of the landfilled wastes and into the river. Sediments in both the on- and off-site ponds appear to contain some contaminants, albeit low levels. Ammonia is present in the river and apparently the landfill is the major source. No biological assessment was conducted for the aquatic resources present in the ponds and river. Bioassay work, tissue residue levels and ammonia toxicity modeling should be done in order to address environmental impacts. The impacts to aquatic resources associated with the elevated levels of ammonia warrant further attention. We recommend that this site be reviewed by the Biological Technical Advisory Group (BTAG) at the first opportunity.

We are pleased to be informed that the original plan for flood control (a levee) has been revised so as not to alter the riparian forest corridor, and thus not destroying foraging habitat for the Indiana bat.

Please contact Dan Sparks of my staff if you have any questions regarding these comments or require further technical assistance.

Sincerely yours,

Laniel W. Sparks

David C. Hudak, Supervisor

CC: Regional Director, FWS, Twin Cities, MN (FWE-SE)
DOI, OEPR, S. Huff, Chicago, IL
INDR, Dave Turner, Indianapolis, IN
EPA, Techical Support Unit, (5HS-10, Steve Ostradka

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



105 South Meridian Street
P.O. Box 6015
Indianapolis 46206-6015
Telephone 317/232-8603

March 14, 1990

Mr. Bernhard Schorle, RPM 5HS11 U.S. Environmental Protection Agency Region V 230 South Dearborn Street Chicago, IL 60604

Re: Indiana Sanitary Landfill Closure Requirements
Marion (Bragg) Dump
Clay cover: Soil specifications,
Construction Quality Control/Quality
Assurance Program and Maintenance Requirements

Dear Mr. Schorle:

Enclosed are the above named specifications which Mr. Travers, the PRP contractor, requested from IDEM:

- 1. The soil selected for final cover should meet the following requirements:
  - a. meet Unified Soil Classification of ML, CL, OH, MH or CH;
  - b. has a permeability of less than 10-6 cm/sec;
  - c. has a minimum of 50% of weight of particle sizes passing sieve #200;
  - d. has a plasticity index of less than 30.
- The above listed soil requirements should be verified by performance of the approportate soil tests in accordance with the American Society for Testing and Materials (ASTM) standards. Staff recommends the following frequency of various soil tests that should be performed to ensure proper construction of the clay cover:
  - a. Three evenly distributed pre-construction soil samples should be taken from a borrow area. At a minimum, grain size analyses, Atterberg limits, Modified Proctor Maximum Dry Density, and hydraulic conductivity tests should be performed on each obtained soil sample. It should be also verified that soil selected for the clay cap is uniform and meets all the other requirements as listed above.

#### Mr. Bernhard Schorle Page Two

- b. Additional soil tests must be performed during the construction of the clay cap:
  - In-place densities and moisture-density curve performed every 1000 sq feet/lift of compacted soil;
  - Grain size analyses and Atterberg limit every 2000 cubic yard of cover soil:
  - moisture content every 500 cubic yard or more frequent for controlling moisture addition;
  - undisturbed hydraulic conductivity test (Shelby tube)
     every acre on the completed portion of the clay cap.
- 3. A quality control/quality assurance program needs to be provided and at a minimum must include the following:
  - Procedures for controlling moisture content in clay soil, removing of any rocks greater than 1/2 inches in diameter, and reducing soil clods to 2 inches before compaction begins.
  - Performance standards specifications for the construction of the clay cap to ensure that the requirements as listed in comment 1 of this memo have been met.
  - Procedures for controlling contaminated run-off and sediment at the landfill site during the construction phase.
- 4. The Operation and Maintenance Plan for the Marion (Bragg)
  Landfill provided a total closure cost estimate. However, a
  detailed description of the closure steps and a listing of
  materials, labor and testing necessary to close the facility,
  and a schedule for final closure of the facility was not
  included in the plan. According to the Solid Waste Rule 329 IAC
  2-15-3 this information needs to be provided in the closure plan.
- 5. Final closure of the facility including closure certification must be performed in accordance with the Solid Waste Rule 329 IAC 2-15-5, a copy of which is enclosed.
- 6. In accordance with Solid Waste Rule IAC 2-15-7 post-closure requirements as listed in the submitted Operation and Maintenance Plan must be performed for a period of ten years following the date of final closure certification. The post-closure must be certified in accordance with Solid Waste Rule 329 IAC 2-15-9. The following additional duties should be implemented during the ten year post-closure period:



## Mr. Bernhard Schorle Page Three

- maintenance of the minimum thickness of final cover and vegetation;
- maintenance of the final contours of the facility as shown on the maps entitled "Marion Bragg Landfill Closure-Top of Cap Grading, Plans I thru V" and dated March 1989;
- maintenance of access control and benchmarks at the facility;
- control of any leachate or gas generated at the facility.
- 7. Staff noted that the post-closure estimate for maintenance of final cover and vegetation included in the plan is less than those required by the Solid Waste Rule 329 IAC 2-15-8. Ten percent of the closure cost estimated for establishing final cover and vegetation at the site should be provided for the maintenance of final cover and vegetation during the ten year post-closure period.

In addition to the above comments, staff recommends that all portions of the landfill site as delineated on the map entitled "Site Map, Marion (Bragg) Landfill" prepared by U.S. EPA and dated 1987, should be final covered regardless of steepness of the existing slopes. If the soil covering appears to be not feasible on the slopes steeper than 33% then other covering technique should be provided. The approximate landfill limits should be delineated on all closure plans prepared for the Marion (Bragg) Landfill. It was also noted that common fill material is planned to be used to bring landfill grades up to the required minimum slope of 2%. Staff recommends that only uncontaminated rocks, bricks, concrete, road demolition waste materials or dirt be used as a common fill.

If you have further questions, please contact the IDEM project manager, Gabriele Hauer, at AC 317/243-5188.

Very truly yours

Reginald O. Baker, Chief Site Management Section

Office of Environmental Response

GH/cd

Enclosures

cc: Kerry Street, U.S. EPA Jim Mayka, U.S. EPA Mark Travers, U.S. EPA

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



105 South Meridian Street
P.O. Box 6015
Indianapolis 46206-6015
Telephone 317/232-8603

March 13, 1990

Mr. Bernhard Schorle, RPM, 5HSll Region V Environmental Protection Agency 230 South Dearborn Street Chicago, IL 60604

Re: Marion (Bragg) Dump/Operation and Maintenance Plan

Dear Mr. Schorle:

Staff of the Indiana Department of Environmental Management has reviewed the above named document. Our review generated the following comments.

#### OPERATION AND MAINTENANCE PLAN

#### Section 2:

Although the document outlines the tasks to be performed, it does not specify who will be doing the work. It also does not indicate what type of training levels are anticipated for the workers; even though level D clothing is planned.

#### Section 2.2.5 - Page 7:

The capital cost should be figured for ten years instead of five years. In accordance with the Solid Waste Rule 329 IAC 2-15-7, post-closure requirements must be performed for a period of ten years following the date of final closure certification.

#### Section 2.3.1:

The final paragraph regarding sampling. The information is confusing. IDEM would like to have the statement clarified.

#### Section 2.3.2 - Page 9:

 The IDEM list of indicator parameters consists of 15 indicator parameters instead of 8 parameters as stated in this Section. The 15 parameters should be tested. Mr. Bernhard Schorle Page Two

#### Table 3:

The Indiana Indicator Parameters list for the Phase I monitoring program must include the following parameters:

- 1) Field pH
- 2) Specific conductance
- 3) Chloride
- 4) Boron
- 5) Ammonia
- 6) Sodium
- 7) Chemical oxygen demand
- 8) Total phenolics
- 9) Methylene chloride
- 10) 1,1 Dichloroethane
- 11) Toluene
- 12) Benzene
- 13) 1,2-Dichloroethene (total)
- 14) Ethyl benzene
- 15) 2-Butanone (Methyl ethyl ketone)

#### - Second Paragraph:

The confirmatory sampling should take place as soon as possible, not during the next quarterly sampling.

#### - page 10:

"Samples requiring refrigeration for preservation will be immediately transferred to coolers packed with ice or ice packs." Will these coolers have ice in them when the samples are taken in the field or will the samples be packed into the ice chests upon arrival back at the trailer? During the last sampling, February 1990, samples were transported in coolers without any cooling agent in them. The samples were first cooled upon return to the trailer. IDEM recommends immediate cooling of samples in the field.

#### Section 2.3.4:

In the cost estimates, there is a cost for well installation. Are new wells planned? Why is this cost included in the Operation and Maintenance plan?

#### LIST OF TABLES:

#### Table 1:

The State shall be listed on the emergency contacts list as stated in Section 2.2.2 - Page 10 - last bullet.

Mr. Bernhard Schorle Page Three

## Table 3:

See comments to Section 2.3.2 - page 9.

#### Estimated Annual Post-Closure Costs:

Staff noted that the post-closure estimate for maintenance of final cover and vegetation included in the plan is less than those required by the Solid Waste Rule 329 IAC 2-15-8. Ten percent of the closure cost estimated for establishing final cover and vegetation at the site should be provided for the maintenance of final cover and vegetation during the ten year post-closure period.

#### Ground Water Monitoring Plan

## Section 2.3.1 - Page 3:

Staff does not agree with establishing the list of chemical parameters as procedures indicate. One round of sampling is not enough. Staff needs a database of about 5 years sampling results, before making a list.

If the standards are exceeded in a zone during a sampling episode, why should there be a waiting period until the next quarter for another round of confirmatory sampling? Confirm immediately if acute criteria is exceeded. In staff's opinion, confirmatory sampling in the next quarter will be taken for any parameter which is determined by U.S. EPA and IDEM as requiring such confirmation.

All subsequent monitoring parameters will be determined or should be determined after a review by the PRP Group, EPA and IDEM.

We do not agree to the method of averaging results within each zone. The purpose of sampling shallow and deep wells is to monitor the quality of water at different levels of the aquifer. The averaging of contaminant concentrations in the shallow and deep wells has the equivalent effect of screening the entire length of aquifer. Technically, this method of aquifer monitoring is not an acceptable practice.

The averaging of results within each zone is mentioned in the RAP. But we also strongly believe if a correction is needed in procedural mechanics, it should be amended in the following plans.

It is stated "If the standards are exceeded, subsequent action will be taken, which will include both the averaging of results of water quality analyses for monitoring wells from each zone...."

IDEM has suggested in prior comments to EPA that the more accurate methodology and ground water monitoring technique would not allow any



Mr. Bernhard Schorle Page Four

"averaging" of wells within selected zones. Instead, each well should be sampled according to 40 CFR 265.92(b)(3), Ground Water Monitoring, which states: "For each indicator parameter specified in 265.92(b)(3), the owner or operator must calculate the arithmetic mean and variance, based on at least four replicate measurements on each sample, for each well monitored in accordance with 265.92(d)(2), and compare these results with its initial background arithmetic mean. The comparison must consider individually each of the wells in the monitoring system, and must use the Student's test at the 0.01 level of significance (see Appendix IV) to determine statistically significant increases (and decreases, in the case of pH) over initial background."

State reference within 329 IAC 2 follows:

329 IAC 2-16-5 Determining increases over background

Authority: IC 13-1-12-8; IC 13-7-7-5

Affected: IC 13-1-3; IC 13-7; IC 36-9-30

Section 5: The permittee must determine whether there is a statistically significant increase over background values for each constituent required in the particular ground water monitoring program that applies to the facility. The permittee must make these statistical determinations each time he assesses ground water quality at the monitoring boundary.

- (1) In determining whether a statistically significant increase has occurred, the permittee must compare the ground water quality at each monitoring device at the monitoring boundary for each constituent to the background value for that constituent, according to the statistical procedures specified under paragraph (3) of this subsection.
- (2) The permittee must determine whether there has been a statistically significant increase at each monitoring device at the monitoring boundary within 60 days after completion of sampling.
- (3) The most scientifically valid of the following statistical procedures which will provide a 95 percent level of confidence shall be utilized when determining if a change in the concentration of a constituent has occurred or if ground water quality standards have been exceeded:
  - (A) Mann-Whitney U-test,
  - (B) Student's T-test,
  - (C) Temporal or Spatial Trend Analysis,

Mr. Bernhard Schorle Page Five

329 IAC 2-16-5 Section 5. (1) states that to determine whether a statistically significant increase has occurred over background values for each constituent required in a particular ground water monitoring program, one must compare the ground water quality at "each monitoring device...".

Section 5 also refers in paragraph (3) to the "Student's T-test" previously cited within the 40 CFR Ground Water Monitoring justification for denying "averaging" practices of the PRPs sampling of ground water monitoring wells within a zone. The Student's T-test specifies that to ensure representative and consistent sample results from "the single monitoring well under investigation", that four samples from that individual well be used.

IDEM is not aware of other existing Federal or State regulations which would contradict the citations which appear above. Therefore, IDEM again requests the supporting technical reference Federal and/or State which provides rationale justifying the PRP's practice of "averaging", results of water quality analyses from various wells in the same zone. We believe this to be a significant issue since this practice can trigger a "no action alternative" although ground water remediation may be necessary.

## Sampling and Analysis Plan

#### Section 2 - Page 1 of 6:

It is stated that a bioaccumulation study will occur only if the <u>initial</u> sampling effort dictates its need. If one of the following sampling events show a need for bioaccumulation studies, will they be conducted? Please clarify.

#### Health and Safety Plan

The Health and Safety Plan for the Operation and Maintenance period has an August 31, 1989, date on it. Has a new version been written?

In the site description it is indicated that the site is slightly wooded with trees up to six inches in diameter and vegetated with grasses. This is not the current view of the site. This statement needs to be replaced with an accurate site description.

#### Figure 6:

It is mentioned that the physical activities include installation and/or removal of monitoring wells and soil borings. For these activities the personal protection equipment should include respirators.

Mr. Bernhard Schorle Page Six

In addition, this Health and Safety Plan does not meet the requirements for a Health and Safety Plan as set forth by OSHA. Since these activities shall be taking place after the new OSHA 29 CFR 1910 regulations are in effect, the Health and Safety Plan must reflect the newer requirements. This Health and Safety Plan is unacceptable. Since the plan is for one specific time period, it must stand as a sole document to protect the health and safety of those working on the site. At the end of March 1990, IDEM will have a software package about elements of H&S plans available which can be used to develop an appropriate H&S plan. For further information, see the attached State guidance for H&S plans.

#### General Comments:

- 1. The document contains the July 1989 draft of the Quality Assurance Project Plan (QAPP) which is no longer the most recent draft. The most recent QAPP draft is dated September 1989. In addition, the Remedial Action Plan (RAP), the Ground Water Monitoring Plan and the Sampling and Analysis Plan (SAP) have been made attachments to this document. All of these plans have had comments submitted by staff, which as of yet have not been adequately addressed. Any documents to these attachments are the same as those made on previous reviews of the documents.
- 2. The Operation and Maintenance Plan for the Marion (Bragg) Dump provided a total closure cost estimate, however, a detailed description of the closure steps and a listing of materials, labor and testing necessary to close the facility, and a schedule for final closure of the facility was not included in the plan. According to the Solid Waste Rule 329 IAC 2-15-3 this information needs to be provided in the closure plan.
- 3. In accordance with Solid Waste Rule 329 IAC 2-15-7 post-closure requirements as listed in the submitted Operation and Maintenance Plan must be performed for a period of ten years following the date of final closure certification. The post-closure must be certified in accordance with Solid Waste Rule 329 IAC 2-15-9. The following additional duties should be implemented during the ten year post-closure period:
  - maintenance of the miniumum thickness of final cover and vegetation;
  - maintenance of final contours of the facility as shown on the maps entitled "Marion Bragg Landfill Closure - Top of Cap Grading, Plans I thru V" and dated March 1989.
  - maintenance of access control and benchmarks at the facility;
  - control of any leachate or gas generated at the facility;

Mr. Bernhard Schorle Page Seven

4. In addition to the above comments, staff recommends that all portions of the landfill site as delineated on the map entitled "Site Map, Marion (Bragg) Landfill" prepared by U.S. EPA and dated 1987, be final covered regardless of steepness of the existing slopes. If the soil covering appears not to be feasible on the slopes steeper than 33%, then other covering techniques should be provided. The approximate landfill limits should be delineated on all closure plans prepared for the Marion Bragg Landfill. It was also noted that common fill material is planned to be used to bring landfill grades up to the required minimum slope of 2%. Staff recommends that only uncontaminated rocks, bricks, concrete, road demolition waste materials or dirt be used as a common fill.

If you have further questions, please contact the IDEM project manager, Gabriele Hauer, at AC 317/243-5188.

Very truly yours,

Reginald O. Baker, Chief Site Management Section Office of Environmental Response

GR/mg

Attachments

cc: Kerry Street, U.S. EPA
Jim Mayka, U.S. EPA
Manuela Johnson, IDEM
Doug Montgomery, IDEM
Bill Hayes, IDEM

#### ELEMENTS OF HEALTH AND SAFETY PLANS

Any H&S plan approved by OER must thoroughly cover four major areas:

- Management committment and employee involvement in the program ensure that all personnel have a clear understanding of the
  health and safety program and the priority management places on
  it. Each plan should:
  - a. Establish clear goals along with the methods that will be used to achieve them:
  - b. Provide visible top managment involvement in implementing the program so that all concerned will understand that management's commitment is serious;
  - c. Provide for and encourage employee involvement in the structure and operation of the program;
  - d. Assign and communicate the responsibility for all aspects of the program so that managers, supervisors, and staff in all parts of the organization know what is expected of them;
  - e. provide adequate authority and resources to responsible parties, so that assigned duties can be accomplished;
  - f. provide for periodic (as appropriate to the tasks being performed) review of the program to evaluate the success or failure of various parts, and the incorporation of changes that will eliminate deficiencies.
- 2) Worksite Analysis So that all hazards are identified, this analysis should include:
  - a. comprehensive baseline worksite surveys for safety and health and periodic (as appropriate to the job) comprehensive update surveys;
  - analysis of planned and new facilities, processes, materials, and equipment;
  - c. perform a job hazard analysis. This analysis should include: 1) Identification of hazards; 2) Evaluation of the hazards; 3) Control measures for hazards that are identified (see section C, 3, below); and 4) Procedures for emergency response (see Part IV, "Site Specific Health and Safety Plans:, and C, 3, below).
  - d. provide for regular site safety and health inspections;
  - e. detail the mechanism by which employees can (without fear of reprisal) inform management of potential health and safety hazards;

- f. provide for investigation of accidents and "near miss" incidents so that their causes and means for prevention can be identified;
- g. analyze illness and injury trends over time so that patterns can be identified and prevented.
- 3) Hazard Prevention and Control establish procedures that provide for prompt correction or control of current and potential hazards. At a minimum those procedures should include the following:
  - a. the use of engineering techniques where feasible and proper. Engineering controls are generally preferred, but consideration must be given to: 1) the complexity of abatement technology; 2) the degree of risk; and 3) the availability of the necessary equipment, materials, and staff qualified to complete the correction;
  - b. procedures for safe work which are followed by all. Work procedures should include training, positive reinforcement, correction of unsafe performance, and, if necessary, enforcement through a clearly communicated disciplinary system;
  - c. provisions for the selection and use of personal protective equipment;
  - d. administrative controls, such as reducing the duration of exposure.
  - e. provide for facility and equipment maintenance, to prevent hazardous breakdowns;
  - f. preparations for emergencies, including training and drills as needed. Response to emergencies should be second nature;
  - g. a medical program which includes the availability of first aid on-site, and arrangements with a nearby physican and emergency medical facility.
- 4) Safety and Health Training Training must be provided which ensures that all employees understand the hazards to which they may be exposed, and how to prevent harm to themselves and others from exposure to these hazards. All programs must provide training in at least the areas listed below.
  - a. Supervisors must receive additional training to carry out their safety and health responsibility. They must understand those responsibilities and the reasons behind them. All supervisors should be trained to:

- analyze the work under their supervision to identify unrecognized potential hazards;
- 2) inspect work areas to ensure that all physical barriers are in place, and that safe work practices are being followed;
- 3) reinforce employee training on potential hazards, protective measures, and changes in working conditions;
- b. Employees shall not be allowed to participate in or supervise field activities until they have been trained to the level appropriate for their job function (see Section \_\_\_). All site workers must receive at least the minimum training required by OSHA in 29 CFR Part 1910.120. Site specific training must be provided which covers:
  - 1) potential hazards on the site;
  - 2) emergency response procedures;
  - use of personal protective equipment;
  - 4) work practices by which an employee can minimize risks from hazards;
  - 5) safe use of engineering controls and equipment on the site;
  - decontamination procedures;
  - 7) confined space entry procedures;
  - 8) the site spill containment program.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

#### INDIANAPOLIS

# OFFICE MEMORANDUM

DATE

March 7, 1990

TO:

Harry Atkinson

Site Investigation Section/OSHWM

THRU:

Reggie Baker KM 3/8/90

FROM

Gabriele Hauer

Site Management Section/OER

SUBJECT:

Site Investigation - Eastsite Cove adjacent to the Marion (Bragg)

Superfund Site in Marion, Grant County

Based on the telephone conversation with you and Richard Molini on 3/1/90, I request that your section review the attached geophysical report to advise if this geographical survey is a proper assessment for the 10 scres on the southeast side of the Marion (Bragg) Dump, which had been originally a part of the Superfund site. Based on the geophysicalsurvey, these 10 acres have been eliminated from the Superfund site. No other investigations e.g. subsurface soil samples, soil borings or ground water sampling have been conducted. If it is deemed necessary, please conduct further investigations to assess the site adequately.

Secondly, there are complaints about dumping on the Eastside Cove property. The above mentioned 10 acres are a part of this property. For more information see the attached Fax with the complaint letter.

If you need more information, please contact me at 243-5188..

GH/cd

Attachments: Site Plans

Site Description :

Geophysical Investigation Report

Complaint letter



# United States Department of the Interior



FISH AND WILDLIFE SERVICE BLOOMINGTON FIELD OFFICE (ES) 718 North Walnut Street Bloomington, Indiana 47401 (812) 334-4261 FAX 334-4273

October 3, 1990

Richard B. Stewart, Assistant Attorney General Environment and Natural Resources Division U.S. Department of Justice Main Justice Building, Room 2143 Washington, D.C. 20530

Dear Mr. Stewart:

This regards the proposed Consent Decree for United States v. Yount, et al., D.J. Ref. 90-11-3-251.

The U.S. Fish and Wildlife Service (Service), as a Bureau of the Department of the Interior (Department), has natural resource trustee responsibility for migratory birds, anadromous fish, and federally listed threatened and endangered species. As pointed out in our August 25, 1989 letter to the U.S. Environmental Protection Agency (copy enclosed), the Service continues to have concerns regarding the potential for natural resource impacts resulting from this site. Therefore, we would like to offer the following comments.

Page 3, paragraph 1 of the proposed consent decree states:

"WHEREAS, pursuant to S. 122(j) of CERCIA, 42 U.S.C. S. 9622(j), U.S. EPA notified the Federal natural resource trustee of negotiations with PRPs on the subject of addressing the release or threatened release of hazardous substances at the Facility, and U.S. EPA has encouraged the participation of the Federal natural resource trustee in such negotiations; . . . "

The Service, and the Department, Office of Environmental Affairs, were not notified regarding negotiations for this particular site, nor have we been "encouraged" to participate in negotiations. There was no response to our letter of August 25, 1989 to EPA, and the only contact with EPA regarding this site since August 1989 was a telephone conversation (August 1990) in which we requested a copy of the Draft Consent Decree. The paragraph should therefore be deleted from the Consent Decree unless it is EPA's intention to fulfill these requirements before this document is finalized.

In our letter to EPA dated December 7, 1987 concerning the draft consent decree (copy enclosed), the Service stated that "We recommend that natural resource damage claims and mitigation of impacts to natural resourcesammdent OF JUST wetlands be resolved and included in the consent decree concurrent with any

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limit of liabilities or covenant not to sue." Our concerns, although presented in a timely fashion, apparently have not been addressed.

On pages 16 and 17 of the Record of Decision (ROD), monitoring of the interim remedy was expanded to include: 1) quarterly sampling surface waters at 3 onsite pond locations and 5 river locations; 2) additional studies consisting of fish bioassay work for on-site and off-site ponds and the river; and, 3) general toxicity tests on river ammonia levels. However, according to the Consent Decree's Appendix B, Remedial Action Plan, there is a decision tree (Figure 5-1) which has the potential to render these additional monitoring requirements "unnecessary." Since the ROD and not describe these monitoring requirements as optional, it would seem prudent that they are implemented as originally intended.

EPA did conduct an investigation on the aquatic resources present in the Mississinewa River on October 26, 1989, as we had requested in our August 25, 1989 letter (apparently a coincidence). The EPA study used several methodologies, including one which is commonly referred to as the "Index of Biotic Integrity" (IBI). Although this study was well done and informative, it appears that the focus of the study did not completely match the informational needs associated with this site, and therefore the Service cannot at this time concur with its findings. This investigation should not substituted for the monitoring required by the ROD, nor its conclusions used in the context of the Figure 5-1 decision tree.

If you have any questions regarding these comments, please contact Dan Sparks of my staff at FTS 332-4265.

Sincerely Yours,

David C. Hudak Supervisor

cc: Regional Director, FWS, Twin Cities, MN (AFWE-EC)

EPA, Chicago, IL (5HS-11)

DOI, OEA, Chicago, IL - (Huff)

FWS, DEC, Washington, D.C. - (Escherich)



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

BLOOMINGTON FIELD OFFICE (ES)
718 North Walnut Street
Bloomington, Indiana 47401
(812)334-4261

August 25, 1989

Bernard Schorle, RPM
U. S. Environmental Protection Agency
Indiana Site Management Unit (5HS-11)
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Schorle:

Thank you for sending us a copy of the September 1987 Record of Decision (ROD) the Marion-Bragg Landfill, Marion, Indiana. Based on the July 14, 1989 telephone conversation between yourself and Dan Sparks of my staff, review of the Remedial Investigation/Feasibility Study (RI/FS), review of the ROD, and visit to the site, we would like to offer the following comments. These comments are of a technical assistance nature only and do not necessarily reflect the views of the Department of the Interior.

Our concerns stem from the valuable fish and wildlife habitats in and adjacent to this site. The on-site pond and the river provide suitable feeding and resting habitat for many species of migrating waterfowl. Many piscivorous birds (including belted kingfisher and herons) are expected to be found in this area. This site is within the range of the federally endangered Indiana bat (Myotis sodalis) and the forested banks of the Mississinewa River likely provide suitable foraging habitat.

The selected remedy for the site, as described in the 1987 ROD includes: capping the landfill, providing flood control measures, restricting access, providing new drinking water wells to those affected by the site, and monitoring the groundwater to determine the effectiveness of the interim remedy. On pages 16 and 17 of the ROD monitoring of the interim remedy was expanded to include: 1) quarterly sampling surface waters at 3 on-site pond locations and 5 river locations; 2) additional studies consisting of fish bioassay work for on-site and off-site ponds and the river; and, 3) general toxicity tests on river ammonia levels. Based on information we received during the July 14, 1989 telephone conversation, the additional studies as described above probably will not be done.

It does not appear that the selected remedial actions will be adequate to protect the environment. Although an impervious cap will reduce percolation through landfilled wastes, runoff into the onsite pond will serve to recharge the local shallow aquifer which flows through a portion of the landfilled wastes and into the river. Sediments in both the on- and off-site ponds appear to contain some contaminants, albeit low levels. Ammonia is present in the river and apparently the landfill is the major source. No biological assessment was conducted for the aquatic resources present in the ponds and river. Bioassay work, tissue residue levels and ammonia toxicity modeling should be done in order to address environmental impacts. The impacts to aquatic resources associated with the elevated levels of ammonia warrant further attention. We recommend that this site be reviewed by the Biological Technical Advisory Group (BTAG) at the first opportunity.

We are pleased to be informed that the original plan for flood control (a levee) has been revised so as not to alter the riparian forest corridor, and thus not destroying foraging habitat for the Indiana bat.

Please contact Dan Sparks of my staff if you have any questions regarding these comments or require further technical assistance.

Sincerely yours,

good C. Hudan

David C. Hudak,

Supervisor

cc: Regional Director, FWS, Twin Cities, MN (FWE-SE)

DOI, OEPR, S. Huff, Chicago, IL INDR, Dave Turner, Indianapolis, IN

EPA, Techical Support Unit, (5HS-10, Steve Ostradka

ES: DSparks/flp/08-25-89/332-4265/marion/word/rca

# FILE COPY

December 8, 1987

Ms. Cindy Nolan (5HR-11) U. S. Environmental Protection Agency 230 S. Dearborn Street Chicago, Illinois 60604

Dear Ms. Nolan:

This leter is in response to your November 30, 1987 request for our review of the draft consent decree and interim remedial action statement of work for the Marion-Bragg site located in Marion, Grant County, Indiana. We have completed our review and generally recommend that additional discussion on impacts to natural resources and their habitats be included in these documents. In previous review comments coordinated with you, our primary interest has been the collection of data necessary to assess potential impacts to fish and wildlife resources. The consent decree has discussions that limit claims for damage and the statement of work identifies remedial actions that could have adverse impacts on natural resources. Therefore, we suggest that adverse effects to natural resources be identified and a discussion on mitigation of impacts be included in these documents. Our comments on specific portions of the aforementioned documents are as follows:

Consent Decree, Page 11 and 12, 2.

This section states that no federal, state, or local permits are required for work on-site. Proposed language states that if the Settling Defendants are unable to obtain necessary permits the U. S. Environmental Protection Agency (U. S. EPA) and Indiana will expedite issuance. It is our understanding that the site will be regraded and a clay soil cap will consolidate existing seeps, sediments, and exposed refuse. If existing ponds and/or wetlands are filled as a result of remedial actions, a Section 404 permit under the Clean Water Act may be required. Since compliance with other environmental laws is in accordance with CERCLA procedures, we recommend that mitigation of unavoidable impacts to wetlands be identified as a requirement in the consent decree. In addition, we recommend that U. S. EPA and Indiana not agree to expedite issuance of unobtainable permits for the defendants.

"Consent Decree, Page 41 and 42. A. and B.

These sections, as suggested by the defendants, limit the current and future liability from the release of hazardous substances from the Marion-Bragg site. We recommend that natural resource damage claims and mitigation of impacts to natural resources and wetlands be resolved and included in the consent decree concurrent with any limit of liabilities or covenant not to sue.

Statement of Work, Page 3, last paragraph

This paragraph states that hazardous materials from the landfill will be removed for RCRA disposal. As discussed in our June 10, 1987 letter to you, we recommend that the heavily-polluted sediments from the pond be removed and disposed of as part of the discussed action. Additionally, we recommend that a mitigation plan be developed if any wetlands or deepwater habitats are filled as a result of required remedial actions. We would be glad to participate with you in developing a mitigation plan for impacts to natural resources and wetland habitats associated with this site or necessary remedial actions.

Statement of Work, Page 7, Task 1 description and supplemental investigations report

It is stated that biomonitoring work will be developed, and subsequent results will be reported. We request that this office be coordinated with and allowed the opportunity to review these documents.

We appreciate the opportunity to coordinate with you at this early stage of project planning. If you have any questions regarding our comments or would like to discuss additional sampling alternatives, please contact Don Steffeck of my staff.

Sincerely yours,

David C. Hudak, Supervisor

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cc: Regional Director (FWE-EC), U. S. Fish and Wildlife Service, Twin Cities, MN Regional Environmental Officer, Department of the Interior, Chicago, IL

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

#### **INDIANAPOLIS**

# OFFICE MEMORANDUM

DATE:

THRU:

March 6, 1990

TO:

Gabriele Hauer Site Management Section

With 3/0/90

Larry Studebaker Zul 7/4/4° Reggie Baker RNR 3/12

FROM:

Manuela Johnson and Doug Montgomery

Technical Support Section

SUBJECT:

. 5

Technical Review Comments regarding Operation and Maintenance Plan for Marion Bragg Dump, Marion, IN (November 4, 1989 edition)

This document was received by staff on January 22, 1990, yet the date on the cover page is November 4, 1989. The document contains the July 1989 draft of the Quality Assurance Project Plan (QAPP) which is no longer the most recent draft. The most recent QAPP draft is dated September 1989. In addition, the Remedial Action Plan (FAP), the Groundwater Monitoring Plan and the Sampling and Analysis Plan (SAP) have been made attachments to this document. All of these plans have had comments submitted by staff, which as of yet have not been adequately addressed. Any comments to these attachments are the same as those made on previous reviews of the documents.

#### Operation and Maintenance Plan Section 2

Although the document outlines the tasks to be performed it does not specify who will be doing the work. It also does not indicate what type of training levels are anticipated for the workers, even though level D clothing is planned.

- 2.3.1 In the final paragraph regarding sampling the information is a bit confusing. IDEM would like the statement clarified.
- 2.3.2 page 10 "Samples requiring refrigeration for preservation will be immediately transferred to coolers packed with ice or ice packs." Will these coolers have ice in them when the samples are taken in the field or will the samples be packed into the ice chests upon arrival back at the trailer? During the last sampling, February 1990, samples were transported in coolers without any cooling agent in them. The samples were first cooled upon return to the trailer. IDEM recommends immediate cooling of samples in the field.
- 2.3.4 In the rost estimates there is a cost for well installation. Are new wells planned? Why is this cost included in the Operation and Maintenance plan?

#### Table 1

The state shall be listed on the emergency contacts list.

## Health and Safety Plan

The Health and Safety Plan for the Operation and Maintenance period has an August 31, 1989 date on it. Has a new version been written?

In the site description it is indicated that the site is slightly wooded with trees up to six inches in diameter and vegetated with grasses. This is not the current view of the site. This statement needs to be replaced with an accurate site description. In addition, this Health and Safety Plan does not meet the requirements for a Health and Safety Plan as set forth by OSHA. Since these activities shall be taking place after the new OSHA 29 CFR 1910 regulations are in effect the Health and Safety Plan must reflect the newer requirements. In other words, this Health and Safety Plan is totally unacceptable. Since the plan is for one specific time period it must stand as a sole document to protect the health and safety of those working on the site.

#### **INDIANAPOLIS**

# OFFICE MEMORANDUM

DATE:

February 6, 1990

TO:

Marion (Bragg) Dump III GI THRU:

Reggie Baker ROA 3/1

FROM:

Gabriele Hauer

Site Management Section

Off.

SUBJECT:

Public Availability Session in Marion regarding the Marion (Bragg) Dump

On Tuesday, January 23, 1990, staff attended a public availability session at the Marion Public Library in Marion, Indiana. The purpose of the monthly meeting was to keep the public informed about the ongoing activities on the Superfund site.

The U.S. EPA was represented by Mr. Bernie Schorle, Remedial Project Manager. Also, attending were: Craig F. Meuter, of the U.S. Army Corps of Engineers, Mark A. Travers, a consultant with de maximis, two representatives of the media and seven citizens, including Marijean Stephenson, the president of the HEAL-Environmental Group.

The attendants were informed about the activities on-site which have been accomplished since the last public meeting:

- All 10 monitoring wells are installed.
- The sampling of the monitoring wells, surface—water and river sediment will begin in the lst week in February.
- The fencing around the 72 acre site has been completed except for the south boundary of the dump.
- The clearing of the area for the clay cap will be completed in March 1990.

The meeting was then opened for questions. Staff participated in the discussion.

The main concerns of the citizens were:

- The proper function of the monitoring wells (e.g. overlapping of the screened intervals)
- Erosion control along the river. Ms. Stephenson wanted to know if the plans have changed according to the suggestions made by Mr. Niedergang of EPA in the previous meeting. Mr. Schorle replied that the plans haven't changed at this time. Mr. Mark Travers mentioned the bank-monitoring inspections which will be done during the Operation and Maintenance Phase and the bank-stabilization which will be perfomed if it is deemed necessary.

Marion (Bragg) Dump Page 2 February 6, 1990

- 10 acres on the south east side of the Superfund site which have not been properly addressed in the RI.
- Grant County Landfill, which, in the opinion of the citizens, is not properly operated. (e.g. cracks in the clay cap, leachate etc.)

The meeting ended at about 7:30 p.m.

#### **INDIANAPOLIS**

# OFFICE MEMORANDUM

DATE: January 19, 1990

[O: Gabriele Hauer

Site Management Section

THRU: Larry Studebaker Zwf 1/25

Reggie Baker Rub 1/26

FROM: Manuela C. Johnson and Doug Montgomery

Technical Support Section

SUBJECT: Comments regarding memorandum dated December 27, 1989 from Bernard Schorle, USEPA Region 5, regarding the Marion Bragg Dump construction meeting held on December 21, 1989.

We received a copy of Mr. Schorle's memo and have noted one problem in the discussions which were held.

On page three (3) of Mr. Schorle's memo it is discussed that the drillers are concerned about pulling the old well casings due to possible breakage. The memo states," Travers asked CWM (ChemWaste Management) to find out what procedure Moretrench, the drilling subcontractor, would use if they just grouted the wells. He believes most of the wells will have to be drilled out, that it will not be possible to just pull them. The drinking water wells are to come out using State standards."

It has been stated numerous times by technical staff that ALL wells, monitoring and drinking water, had to be abandoned in accordance the Indiana Department of Natural Resources ground water well abandonment standards(IC 25-39-1.5). Therefore, we shall again reiterate that all wells to be abandoned on site shall be in accordance with the State of Indiana standards cited above.



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

- Max − (19

# REGION 5 230 SOUTH DEARBORN ST. CHICAGO, ILLINOIS 60604



REPLY TO THE ATTENTION OF:

5HS-11

March 2, 1990

Mr. Mark Travers de maximis, inc. P.O. Box 90348 Knoxville, TN 37990

Re: Marion (Bragg) Dump Site-Biological Studies

Dear Mr. Travers:

Enclosed are two copies of a report on an instream fish water quality study that was done for the river by the Marion (Bragg) Dump. I did not know that this had been done until Gabriele Hauer told me that she had seen a report on it. I then requested a copy of the report from T. Simon of USEPA who was the author of the report and one of the samplers. The sampling was done in October 1989.

The main conclusion of the study was that the site does not appear to be significantly different from the rest of the Mississinewa River basin in the vicinity of Marion. No significant environmental impact was attributable to the Marion (Bragg) Dump nor were perturbations attributable to Lugar Creek.

You may want to have someone from beak consultants review the report.

I also talked with T. Simon regarding the removal of the sandbar from the river north of the site. I assume that he knew which sandbar I was talking about. He estimated that it might take two or three years for the area to return to "normal". Actually, the area of the sandbar is apparently one of the better areas there with regard to biological activity.

Sincerely yours

Bernard J. Schorle

Remedial Project Manager

Enclosure

cc: G.Hauer, IDEM (w/o encl),

#### **INDIANAPOLIS**

# OFFICE MEMORANDUM

DATE:

February 6, 1990

ro:

Marion (Bragg) Dump CERCLA File, IIID3C THRU:

Reggie Baker XM 3/1

FROM:

Gabriele Hauer

Site Management Section

W.

SUBJECT:

Third Construction Meeting

Marion (Bragg) Dump

On January 24, 1990, the third construction meeting was held on site. Representatives of EPA, IDEM, ACOE, de maximis and CWM-ENRAC attended the meeting.

## Project Progress:

- The installation of all 10 monitoring wells is completed.
- 9 out of 17 old monitoring wells and drinking water wells are abandoned (one well is plugged at 23 feet). All wells will be abandoned at the end of the 4th January week.
- 70 75% of the site has been cleared.
- 10,500 feet of silt fence have been installed. The remaining 2,000 feet will be installed when the perimeter fence is completed (end of the 4th week of January).
- A gate on the south side will be installed in the last week of January.

### Problems:

 The east shore of the on-site pond consists of glass debris. It is impossible to excavate the glass without destroying the shore stability.

Solution: overlaying this area with 2 feet of stone (02-4") = DOT No.2 - Stones)

#### Projections:

- The first round of sampling will start in the 2nd week of February.
- The grubbing starts when the sampling is completed.
- The future construction meetings will be held on the 1st and 3rd Wednesday of each month.

#### INDIANAPOLIS

# OFFICE MEMORANDUM

DATE:

January 11, 1990

TO:

Gabriele Hauer

Site Management Section

THRU-

Larry Studebaker (\* 1.7) //15/4: Reggie Baker & 1/13

FROM:

Doug Montgomery and 1/11/90

Technical Support Section

SUBJECT:

September 29 Revision QAPP Marion (Bragg) Dump Monitoring during RD/RA

This revised QAPP/Monitoring Plan also contains the Sampling and Analysis Plan as an attachment. My review of this document focuses on the ground water sampling and monitoring plans discussed and presented in Section 1 of the QAPP and Attachments 4 and 5.

#### Section 1.1

Within the introduction, reference is made to a fish bioaccumulation study and a biological survey which will be conducted only "if necessary". The State has objected to this failure to immediately address the impact of the landfill on the environment through a biological survey and bioaccumulation study. The Feasibility Study addresses the need to conduct these studies since the risk assesment is incomplete without them. People are consuming fish caught on-site and in the river near the landfill. Section 2.4 of the U.S. EPA document Risk Assesment for Superfund Volume II March 1989 states, "It is at this stage (RI/FS) that data collection for ecological assessment should be planned, including field studies, toxicity testing, bioaccumulation studies, and sampling...". Section 4.3 of the same U.S. EPA document states "ecological assessment is an integral part of the RI/FS Work Plan. Technical specialists should be consulted as early as possible in the development of the Work Plan and the Sampling and Analysis Plan, to ensure that the plans for ecological assessment are well designed and capable of answering the necessary questions about the ecological effects of the contaminants at the site". The RI/FS, QAPP, RAP, and Work Plan, all fail to provide for these studies which should be conducted in order to assess both the impact of the dump on the surface water aquatic life and the health threats to consumers of aquatic life.

#### Section 1.8.1.1

According to the Consent Decree (CD), this is an <u>interim</u> remedy. The stated objective of the sampling should be reworded to reflect that monitoring data will be evaluated to "measure the effectiveness of this interim remedy", rather than to "show the effectiveness of this remedy".

#### INDIANAPOLIS

# OFFICE MEMORANDUM

DATE:

January 19, 1990

TO:

Gabriele Hauer

Site Management Section

THRU:

Reggie Baker NA 1/26

FROM:

Manuela C. Johnson mas 1-19-90

Technical Support Section

SUBJECT:

Technical comments regarding the planned canal work in the Mississinewa River near Marion Bragg Dump.

I have reviewed the comments provided by the Indiana Department of Natural Resources (IDNR), the Army Corps of Engineers (ACOE) and other Indiana Department of Environmental Management (IDEM) offices. There are a few technical questions which must be addressed.

The proposed River bank work is to take place directly across from the Marion Bragg Dump Superfund Site. Has the Army Corps of Engineers considered any possible erosion effects caused by the restructuring and protection of the opposite shore. As we noted during a recent site inspection some parts of the river bank on the Marion Bragg site contain or are composed of wastes from the Marion Bragg Dump. If there is an increase in water flow on the Marion Bragg banks then some of these wastes may be washed into the river.

Additionally, the wastes lining the river bank have not been characterized. (We really don't know what wastes compose the river bank besides what has been visually assessed.)

Any activities which will effect the biota and animal life in the area will detrimentally effect the biological studies that are required to be performed on and near the site to assess the site's impact upon the river. It is these biological studies which shall trigger further remedial action or not. If the fish and biota relocate then such a study will not be accurate for determining the impact of the site on the river. This is in turn will affect any ability to determine if further remediation of the site is necessary.

Gabriele Hauer Page 2 January 11, 1990

#### Section 1.8.1.2

Ground water sampling is said to be related to appropriate standards. These standards must be defined. Previous sampling efforts give ERM an idea of what contaminants might be expected. Therefore, standards should be researched and appropriate guidelines defined at this time. The March 13, 1989, memo from Lee Bridges to Swapan Ghosh regarding the ground water-surface water interaction contaminant load allocations discussed in Section 1.8.1.2 refers to the ERM calculated allowable discharge proposal as "voo-doo modeling".

This section also discusses "average concentration of site related contaminants". Averaging results of shallow and deep monitor well samples to determine action levels, is not acceptable because this is equivalent to data manipulation. Further justification of this comment and objections to the improper plan to base biological studies on averaged data and the failure to offer a remedial action upon detection of action levels of contamination have been made to the U.S. EPA and PRPs in the State's May 10, 1989, comments on the draft RAP and Work Plans. Essentially, these plans are unprotective of the environment and are designed to trigger "no further action" or "additional studies" even after action levels of contamination are found in monitor wells at the river. This is unacceptable. This QAPP is a continuation of the apparently technically flawed plan and requires resolution.

The statement "dilution, as it occurs, may be considered as an additional 'safety factor'", is contrary to the intent of the Superfund Amendments Reauthorization Act (SARA). Dilution of dump pollutants by the river increases both the mobility and the volume of pollution.

### Section 1.9.1

Ground water monitor wells must be located downgradient of waste as stipulated in the CD. Wells which fail to meet this criteria may need to be replaced. IDEM specifically requests that MB1 be located along the river per the Feasibility Study recommendation for well location. Subsequent water table measurements will show whether MB1 monitors water from the site or the cemetery.

Attachment 4 Draft Sampling and Analysis Plan/Monitoring and Additional Studies

#### Section 2.2.3

The report states that purge water will be discharged to an "appropriate location". Appropriate locations and the parameters for disposal should be discussed at this time. Disposal on-site has been mentioned in discussions with PRPs. The sewage treatment plant or an injection well may be appropriate disposal locations, however, on-site disposal may not be appropriate. The report is unclear about who will decide where the appropriate discharge location will be. State and Federal regulatory agencies should make that decision.

Gabriele Hauer Page 3 January 11, 1990

#### Section 2.3.2

Water samples from the pond should be collected near the surface and near the bottom to determine the presence of chemicals which sink or float. The plan to collect at mid-depth will fail to determine the presence of contaminants which do not dissolve readily in water.

#### Section 3.2

Discharge of decontamination water on-site may mobilize contaminants or add detergents to the on-site contamination. The vague language about discharge to "an appropriate location" must be clarified.

#### Section 5. Future Studies

The ERM Future Studies are designed to avoid possible remedial action beyond a clay cap, a fence, and flood control. Biological studies and river sediment studies measure contamination in highly mobile aquatic life and mobile river sediments and are difficult to interpret when determining the landfill's influence on the river. To base additional remedial action on contractor interpretation of possible studies rather than on measurable contamination of individual monitor wells avoids the issue of contamination in ground water. Vague language referring to ground water and surface water standards needs to be replaced by defined limits. Adapting the monitor well data to an undefined "standard" and skewing results by averaging is manipulating data and risking the public's health. Delaying remediation and postponing biological studies allows a potential health risk to continue.

#### Surface Water Sampling SOP

As previously discussed, sample collection at mid-depth of the pond will fail to assess the presence of chemicals which sink or float.

Attachment 5 Draft Ground water Monitoring Plan Remedial Design/Remedial Action Monitoring and Additional Studies

#### Section 2.3

This section discusses averaging of data from shallow and deep monitor wells in the event that a monitor well shows action levels of contamination. Averaging results of individual well samples is incorrect procedure; it fails to address the point of entry requirement addressed in both the ROD and SARA Section 121 (d)(2)(b).

Section 7.1, paragraph 2 of the Feasibility Study (FS) states that "In the event monitoring indicates that action levels are exceeded, the decision to implement ground water extraction and treatment will be made by regulatory agencies at that time". The current plan fails to address this potential need for the ground water treatment system at the time of detection of action levels of contamination.

Gabriele Hauer Page 4 January 11, 1990

The plan states that water level measurements will be taken immediately after well completion and again after development. A 24-hour period should pass after the well development before water level measurements should be taken. Also, the plan to cease water level measurements after one year should be reconsidered. Annual variations of the water table may be considerable and may affect the type and volumes of leachate. Both water level measurements and monitor well sampling should continue for a minimum time period despite early sample results which might cause a Decision Tree choice of no further evaluation. Water levels should be recorded with relation to mean sea level.

Reference is again made to comparision of data to "appropriate standards". The State has requested in the May 10, 1989, letter to EPA that these standards be defined.

#### Section 2.4

Very vague language about ground water quality suggests that monitoring might be discontinued at an early date. The statement is made, "should ground water quality remain relatively consistent over time, monitoring may not need to be as extensive and may be reduced". The phrases "relatively consistent" and "over time" are indefinite. The language should be quantifiable and specific.

#### Section 2.5

The Decision Tree for Future Studies is a plan to find nothing and do nothing. This is achieved by averaging the data from water quality results found in shallow wells with results found in deep wells to determine whether more studies will be conducted. Because shallow wells may assess different chemicals than deep wells, no further action may be the pre-determined result of any such data manipulation. Further possible remediation will occur only if a bioaccumulation study can be proven to show the impact of site related chemicals on river aquatic life. Such a link will be difficult to prove given unknown migration patterns of aquatic life and mulitiple upstream sources of pollutants.

The Decision Tree prevents a timely bioassay of the site and a prompt remediation if contamination is found in monitor wells.

DM/cd





105 South Meridian Street
P.O. Box 6015
Indianapolis 46206-6015
Telephone 317/232-8603

December 21, 1989

Mr. Bernhard Schorle, RPM, 5HSll U.S. Environmental Protection Agency, Region V 230 South Dearborn St. Chicago, IL 60604

Re: Health and Safety Plan prepared by Chemical Waste Management (CWM) - ENRAC Division for the Marion (Bragg) Dump

Dear Mr. Schorle:

Staff of the Indiana Department of Environmental Management has reviewed the above named document. Our review generated the following comments:

The Health and Safety Plan submitted for the remedial action at the Marion-Bragg Dump is inadequate. It is a generic plan taken from the NIOSH/OSHA/USCG/EPA document "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities".

In the manual it states "this generic plan can be adopted for designing a site safety plan for hazardous waste site cleanup operations. It is not all inclusive and should only be used as a guide, not a standard."

The plan only superficially covers many of the pertinent subjects. The rest of the NIOSH/OSHA/USCG/EPA manual provides a great deal of information about what should be in the plan. Also, the contractor should insure that all safety and health requirements from 29 CFR 1910.120 are addressed by the plan.

29 CFR 1910.134 requires a written respiratory protection program. Guidance is available from IOSHA on preparation of this written program. The respiratory protection plan should be referenced in the Health and Safety plan and contained in the work plan. Other references are listed in table 8-1 of the NIOSH/OSHA/USCG/EPA Manual.

Mr. Bernhard Schorle Page Two

In this plan many of the areas which require one element to be circled had nothing circled. The most blatant of these is in the environmental monitoring section in which nothing has been circled to indicate when environmental monitoring will be conducted.

Additionally, the exposure symptoms and the first aid instructions for worker exposure are not completed.

Lastly, the Marion Bragg site was NEVER a municipal landfill, but rather has always been a Dump. The Health and Safety plan must reflect the uncertainties of dealing with an uncontrolled dump.

If you have any questions or comments, please contact the IDEM Project Manager, Gabriele Hauer at AC 317/243-5188.

Very truly yours,

Reginald O. Baker, Chief Site Management Section Office of Environmental Response

GH/cd

cc: Kerry Street, U.S. EPA Manuela Johnson, IDEM Bill Hayes, IDEM

3036 Hours Marin Bray



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

105 South Meridian Street
P.O. Box 6015
Indianapolis 46206-6015
Telephone 317/232-8603

December 21, 1989

Mr. Bernhard Schorle, RPM, 5HS11 U.S. Environmental Protection Agency Region V 230 South Dearborn Street Chicago, IL 60604

> Re: Comments regarding de maximis Responses to October 18, 1989 Health and Safety Plan Comments

#### Dear Mr. Schorle:

Most of IDEM's concerns and comments we submitted in our letter of October 19, 1989 were addressed in the response letter from Mr. Mark Travers dated December 1, 1989. Please find any exceptions to the responses in the following.

# Introduction

#### Page 1

The State is unsure how to determine if any conflicts exist within the contractor Health and Safety plans if these are not made available to the regulatory agencies (EPA and IDEM). Therefore, the State would like to review the documents.

# Section 5

#### Page 2

de maximis has indicated that the Health and Safety Plan will be amended to define the level of protection at the time benzene or vinyl chloride are encountered during remedial action. This is unacceptable. Since benzene and vinyl chloride are considered group A carcinogens, safety provisions must be made in the Health and Safety Plan, not merely on-site. The permissable levels of benzene and vinyl chloride are extemely low and certainly neither de maximis nor Chemwaste wish to expose their employees to this type of a liability.

## Section 6

#### Page 2

- What are action levels for airborne contaminants and what procedures will be followed if concentrations exceed the action level? (e.g., monitoring for benzene and vinyl chloride, upgrade to level B, etc.)

An Equal Opportunity Employer

Mr. Schorle Page 2

#### Section 9

#### Page. 1

- Although the decontamination water is being collected and the decontamination areas are provided for in the contract documents, de maximis has not discussed the disposal plans for this water.

#### Section 14

## Page 1

- Heat exposure criteria when wearing chemical protective clothing must be established by a physician who has experience treating heat stress.

#### Page 3

- Specific respirator fit test procedures, including daily procedures, should be included in the Health and Safety Plan.
- The State would like de maximis or its contractor to indicate how the Health and Safety Officer shall determine when to change out air purifying filter cartridges. What standards or guidance should be used?
- The State is pleased that a dumpster shall be utilized for refuse generated during site activities. As de maximis is no doubt aware, any refuse which is possibly contaminated must remain on-site and be placed under the cap or must be disposed of in accordance with the hazardous waste regulations. This would include, but not be limited to, items such as drums, carcasses, glass shards, etc.

# Section A

#### Protective Equipment:

- Saranex provides very little protection from aromatics or chlorinated solvents.
- Chem-Tuff provides better protection at a similar cost.
- Tyvek provides no chemical protection.
- Cheavel is only needed if extremely toxic compounds or high concentrations of contamination are found.
- Nitrile gloves and boots proivde very poor protection against several of the compounds found at the site.
- Chemical protective boot covers (such as Chemvel) should be worn over leather boots with latex boot covers (or nitrile) over Chemvel for abrasion protection.
- A minimum of Viton boots and gloves should be worn. Boot covers and glove liners are less expensive Viton. Viton has a limited life before replacement is necessary.
- If level "B" is worn for any reason besides dust protection, Tyvek is not adequate.

Mr. Schorle Page 3

### Section H

Page 1

- Where did the temperatures in the chart come from? How will skin temperatures be measured? When will the skin temperatures be measured?

If you have any questions or comments, feel free to contact the State Project Manager, Gabriele Hauer, at AC 317/243-5188.

Acta triff lonter

Reginald O. Baker, Chief Site Management Section Office of Environmental Response

GH/cd

cc: Kerry Street, U.S. EPA Manuela Johnson, IDEM Bill Hayes, IDEM

#### **INDIANAPOLIS**

# OFFICE MEMORANDUM

DATE:

December 6, 1989

TO:

Larry Studebaker, Chief Z / 12/7/67 Technical Support Section

THRU:

FROM:

Doug Montgomery PMC 12/7/87 Technical Support Section

SUBJECT:

EPA Management Marion (Bragg) Dump Site Marion, IN

As you requested, I am documenting activities of the current EPA Remedial Project Manager (RPM) which have effected the State's role in oversight responsibilities.

State comments addressing the Remedial Action Plan, the Work Plan, the Sampling and Monitoring Plan, and the Quality Assurance Quality Protection Plan have been directed to the RPM to forward to the Responsible Parties. In each case, the State's comments were held by the EPA site manager and not forwarded to the responsible parties.

When the State's monitor well location recommendations went unaddressed by the EPA, I asked Mr. Schorlie what technical assistance he had employed to review the hydrogeology at the site and the State's concerns regarding well location. He responded that he did all the work. Inquiring about his qualifications he admitted that he was not a geologist or a hydrologist.

The State's review of all documents has been compromised by the RPM's failure to forward documents to the State in a timely manner. The EPA has reduced or eliminated the State's review time by keeping documents from the State until the deadline for comments has reached two weeks or has passed. Mr. Schorlie has recently allowed the deadline for comments to the Sampling and Analysis Plan, the Ground Water Monitoring Plan, and the QAPP to pass without providing the State with the document.

Based upon conversations with other staff and legal counsel, the Consent Decree (CD) submitted to the State's Site Manager and legal staff for review lacked attachments. This is very significant since the CD submitted to the Attorney General and forwarded to the Commissioner for signature contained additional documents as attachments. These include the Remedial Action Plan (RAP) and Work Plan. The State had important unresolved comments addressing technical problems with those plans. By including the plans as attachments to the CD, the EPA has attempted to legitimize the documents as approved plans which cannot be changed and which must be adhered to "by law". According to conversation with IDEM legal counsel and Superfund site management, Consent Decrees should not contain such attachments. The CD should not have been changed between its approved review and its submission for the Commissioner's signature.

Larry Studebaker Page 2 December 6, 1989

Approximately 10 acres have been dropped from the remedial action by the EPA since the site was listed on the NPL. In the October 25, 1989, preconstruction meeting in Marion, Mr. Schorlie said that those acres are the "State's problem" and that they would not be addressed in this remedial action.

Although the current action is termed an "interim remedial action" in the CD and ROD, Mr. Schorlie stated on October 25, 1989, that "interim" is a poor choice of words. He stated that in his opinion this remedy constituted the final action. This casual approach to EPA site management is further reflected by Mr. Schorlie's statement in the February 1989 meeting in Chicago that "the fence is only there to hold up the signs." This is in response to discussion about whether the site needed a taller fence.

Mr. Schorlie told me that if the State had problems with Marion (Bragg) they'd have problems at Tippecanoe because he didn't think Tippecanoe was a bad site either.

This memo may help to preclude some of these same problems at the Tippecanoe site. The State also has the responsibility there to implement the best possible data collection system to accurately interpret site conditions, prior to commenting on potential remedial actions.

#### Summary

Plan and Design documents have not been forwarded to the State for review in a timely manner. Some documents were withheld from the State past deadlines for comments. State comments have been withheld from PRPs and edited by the EPA. State technical comments to plans and designs have not been adequately resolved. The RPM has not availed himself of technical resources to review plans or the State's comments to those plans, substituting instead his own personal comments which conform to his belief that "Marion (Bragg) is not a bad site." Mr. Schorlie's response to State comments lack technical justification. The CD reviewed by the State staff was different than that submitted by EPA for the IDEM Commissioner's signature. Ten acres have been dropped from the site without written justification.

DM/cd

cc: Reggie Baker
Gabriele Hauer
Greta Hawvermale

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT $\square$ $\square$ $\square$

#### INDIANAPOLIS

## OFFICE MEMORANDUM

DATE:

November 2, 1989

TO:

Gabriele Hauer

Site Management Section

THRU:

Larry Studebaker 20 4 11/4/4 Reggie Baker Que "

Doug Montgomery WM 11/3/49

Technical Support Section

SUBJECT:

Remedial Design/Remedial Action Work Plan

Marion (Bragg) Dump

Marion, IN

According to your request, I have reviewed this document. Many of the comments about the inadequacy of this Work Plan are identical to comments about the inadequacy of the Remedial Action Plan (RAP) which was reviewed by the State in January 1989. In order to understand the inadequacies of the document under review, some background information is included, which references previous documents and meetings. The U.S. EPA has failed to forward the State's comments regarding the technical inadequacies of previous documents to the Settling Defendants. This is exemplified by a series of comments forwarded to the U.S. EPA on May 10, 1989, regarding many problems with the Work Plan. The U.S. EPA used little, if any, technical support to address these comments. This is evidenced by the letter dated May 22, 1989, in which the EPA replies to some of the State's technical comments for the Work Plan. The State and the U.S. EPA appear to have failed to resolve serious flaws in the RAP and Work Plan.

Further confounding the State's ability to review documents is the failure to forward Marion (Bragg) Dump documents in triplicate to the State in a timely fashion. Documents requiring State review are forwarded in the form of a single draft copy two weeks before deadlines, even though the U.S. EPA has had possession of these documents for weeks or months. In the case of the Consent Decree (CD) and the Record of Decision (ROD), the final form which contained critical document changes was not reviewed by technical staff prior to signature by State authority. Late changes made to the final forms of the Consent Decree and ROD by the U.S. EPA or Settling Defendants have compromised the integrity of the cleanup and circumvented State review processes.

An example of this unreviewed change can be found in the Consent Decree. The draft copy dated March 30, 1988, stated "Any hazardous substances encountered during the removal process, which are contained in drums or any obvious areas of uncontained hazardous substances shall be characterized as required under 40 CFR Parts 260 through 264 and removed from the facility...". This statement is consistent with "good housekeeping", common sense, and State comments regarding the need to identify hazards of drummed and uncontained wastes of all types, both solid and liquid, which might remain at the site during the regrading process. In the Chicago meeting February 9, 1989, the State objected to Memo to Gabriele Hauer Page 2 November 2, 1989

the statement in the RAP that only liquid drummed waste would be categorized for determination of potential hazard. The final version of the CD states "Any liquid hazardous substances encountered during the regrading process, which are contained in drums, or obvious areas of spilled liquid hazardous substances and materials contaminated by them shall be characterized....". The change in the final form of the CD and the Settling Defendants verbal refusal in the February 9, 1989, meeting represents refusal to address hazards posed by drums and spills of solid forms of hazardous waste which could end up in the groundwater, the on-site lake or the river. This late change is not congruous with protection of human health or the environment.

The State expects the Settling Defendants to characterize all drums or other hazardous waste (not merely liquids) per page 16 of the ROD where it is stated "Any drums or other hazardous wastes, if present, would be removed, analyzed and disposed of according to RCRA requirements". This action will be much more protective of human health and the environment.

The most substantial change between the language of draft and final copies of the ROD involves a need for a bioassay of aquatic life in the off-site and on-site ponds and in the river. Although both versions of the ROD state "Additional studies will include fish bioassay work for the on-site and off-site ponds and the river," only the September 1987 draft ROD states "Bioassay work will be required ... " in the section entitled Risk to Receptors. The U.S. EPA interpretation according to the May 22, 1989, letter to the State and the decision tree for biological study from the RAP is that a biological study will only occur if averaged results of monitor well samples (some of which may come from wells which are improperly placed and will screen off-site groundwater) show action levels of contamination, then a biological survey of the river will be needed to determine if a bioaccumulation study is necessary. If those events occur, and the biological accumulation study of "resident fish" in the river show impact from the landfill, then groundwater remediation proposals are to be generated, screened, and eventually one would be implemented. The State believes that this plan is not protective of the environment because:

- 1) Improperly placed wells which are not on line with groundwater flow paths through the dump refuse will fail to monitor the potential pollution generated by the landfill.
- 2) Averaging sample results of monitor wells fails to consider that a plume of contamination may be detected in one well and not another. Flow of contamination to the river from a "point" is addressed in the ROD: "There can be no statistically significant increase of constituents from the groundwater in such surface water at the point of entry or at any point where there is reason to believe accumulation of constituents may occur downstream...".

Memo to Gabriele Hauer Page 3 November 2, 1989

- 3) Averaging results of individual well samples is incorrect procedure; it fails to address the point of entry requirement addressed previously as quoted from both the ROD and SARA Section 121 (d)(2)(b), and is the equivalent of massaging data.
- 4) The Feasibility Study (Section 7.2), the ROD, and the risk assessment all call for the bioassay. Failure to quantify impact on the river may needlessly expose humans to tainted fish.
- 5) A remedial action alternative which might be installed if monitor well samples show action levels of contamination is needed. Contamination detected in monitor wells near the Mississinewa River downgradient from the dump will quickly be conveyed to the river by groundwater movement. The State requested that remedial action alternatives be included in the work plan in letters to the U.S. EPA on May 10, 1989, and July 10, 1989.

In Section 7.1, paragraph 2 of the Feasibility Study (FS) the statement is made that "In the event monitoring indicates that action levels are exceeded, the decision to implement groundwater extraction and treatment will be made by regulatory agencies at that time." The Work Plan fails to address this potential need for the groundwater treatment system at the time of detection of action levels of contamination.

#### Additional Comments

The Work Plan is labeled Marion (Bragg) Landfill. The correct name for the site as listed on the NPL is Marion (Bragg) Dump. The difference is more than cosmetic as a dump is an unregulated, non-permitted area where materials accumulate while a landfill is a system of trash and garbage disposal in which waste is buried between layers of earth. The term "landfill" should be replaced by "dump" on the cover and in the text of the ROD, CD, RAP, QAPP, HASP, and all subsequent Work Plans. The State has voiced this comment previously but the comment has not been forwarded to the contractors.

As the U.S. EPA has inadequately answered the State's concerns to any of the 56 points discussed in the May 10, 1989, letter concerning the RAP and Work Plan, it is advised that numerous technical flaws still exist and that no approval of a Work Plan be currently given by the State.

It is suggested that the misnaming of the site on binding legal documents may be cause to invalidate these documents. The new final drafts of these agreements should contain the correct site name as well as corrections addressing inadequacies of current plans.

#### Conclusions

The Work Plan should not be approved. Drums and spills of waste which may be hazardous but in solid form will not be analyzed or properly disposed of. The bioassay of the on-site pond, off-site pond, and river are needed to assess risk of consumption of aquatic life by humans. The PS and Draft ROD state that this work will be performed. The decision

Memo to Gabriele Hauer Page 4 November 2, 1989

tree in Figure 4-1 is a plan which is not protective of the environment if monitor wells detect action levels of contamination. Averaging the results of monitor well data is improper and manipulative. A corrective action plan should be presented in the current Work Plan so that potentially contaminated groundwater found in monitor wells at the river's edge can be remediated. All ARARs and not just MPDES calculated allowable contamination levels should be applied to determine if action levels are exceeded. This should include U.S. Fish and Wildlife standards which are currently being exceeded in the river for arsenic and ammonia. Previous State comments directed to the U.S. EPA on May 10, 1989, and July 10, 1989, have not been adequately answered to the State's satisfaction. The CD, ROD, RAP, and Work Plans contain language calling the dump a landfill. The titles of these documents should be legally changed as the site labeled in the document title fails to correspond with the site listed on the NPL. Before the State signs off on the correctly titled documents, changes of substance corresponding to State comments which have been made in the interest of a cleanup that is adequate and protective rather than cursory, sloppy, and ill-conceived should be written into the agreements. The EPA should be responsive to the State's need for adequate review time. The EPA must properly address all State technical comments and should justify their response with technical reasons and not simply fail to respond or state "I disagree." Previous State comments should be resolved between the State, U.S. EPA and PRPs prior to approval of documents and plans.

DM/cd

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# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

#### INDIANAPOLIS

# FFICE MEMORANDUM

DATE:

October 30, 1989

Gabriele Hauer

Site Management Section

THRU:

Larry Studebaker Zw L 11/1/47
Reggie Baker | | 11/2

OM:

Doug Montgomery DMM 10/31/89

Technical Support Section

BJECT:

QAPP Marion/Bragg Marion, Indiana

Per your request, I have reviewed the above-named document. Although the U.S. EPA has had this document since July 14, 1989, the RPM failed to forward it to the State until September 8, 1989. The State needs the document in triplicate rather than as a single copy. These actions by the U.S. EPA have slowed the State's response process. Ideally, the RPM for Marion (Bragg) Dump will receive the State's comments and pass them to the Settling Defendants for reply. Justified responses to the State's comments are expected from the PRPs.

The QAPP should not be approved in its current form. This document repeats and reinforces plans which the State has previously rejected as failing to provide adequate protection to the environment. The State's correspondence to EPA May 10 and July 10, 1989, documents the plan inadequacy.

Within the introduction, reference is made to a fish bloaccumulation study and a biological survey which will be conducted only "if necessary". The State has objected to this failure to immediately address the impact of the landfill on the environment through a biological survey and bioaccumulation study. The Feasibility Study addresses the need to conduct these studies since the risk assessment is incomplete without them. People are consuming fish caught both on-site and in the river near the landfill. Section 2.4 of the U.S. EPA document Risk Assessment for Superfund Volume II March 1989 states, "It is at this stage (RI/FS) that data collection for ecological assessment should be planned, including field studies, toxicity testing, bioaccumulation studies, and sampling ... ". Section 4.3 of the same U.S. EPA document states, "ecological assessment is an integral part of the RI/FS Work Plan. Technical specialists should be consulted as early as possible in the development of the Work Plan and the Sampling and Analysis Plan, to ensure that the plans for ecological assessment are well designed and capable of answering the necessary questions about the ecological effects of the contaminants at the site". The RI/PS, QAPP, RAP, and Work Plan, all fail to provide for these studies which should be conducted in order to assess both the impact of the dump on the surface water aquatic life and the health threats to consumers of aquatic life.

Section 1.6 should identify "remedy" as "interim remedy".

Throughout this document the site is identified as Marion (Bragg) Landfill. This is incorrect. Since the site is a dump and is identified on the NPL as Marion (Bragg) Dump. The title of the study should be changed to reflect this fact. Language throughout the document should be changed substituting "dump" for "landfill".

Section 1.8.1 discusses "average concentration of site related contaminants". Averaging results of monitor well samples to determine action levels is not acceptable. This is equivalent to data manipulation. Purther justification of this comment and objections to the improper plan to base biological studies on averaged data and the failure to offer a remedial action plan upon detection of action levels of contamination have been made to the U.S. EPA and PRPs in the State's previously referenced comments on the draft RAP, and Work Plans. Essentially, these plans are unprotective of the environment and are designed to trigger "no further action" or "additional studies" after action levels of contamination are found in monitor wells at the river. This is unacceptable. The decision tree which fails to trigger any remedial action and which postpones biological assessments is not protective of the environment. This QAPP is a continuation of the technically flawed plan and requires resolution.

Section 1.8.3 also discusses use of the decision tree which is not protective of the environment.

Section 1.9.1 discusses ground water sampling. The locations of wells MBI and MB8 are not downgradient of the refuse and will fail to assess the quality of water which has flowed through waste. The Record of Decision calls for eight downgradient monitor wells. The current plan will have four upgradient and only six downgradient monitor wells.

The July draft of the Sampling and Analysis Plan, Remedial Design/Remedial Action Monitoring and Additional Studies is seriously flawed and its inclusion as part of the QAPP poses review and approval problems for the QAPP. This plan which is Attachment 4 of the QAPP should be submitted as a separate document for review. This plan should not be a part of the QAPP.

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105 South Meridian Street P.O. Box 6015 Indianapolis 46206-6015 Telephone 317/232-8603

October 18, 1989

Bernhard Schorle, RPM, 5HS11 U.S. Environmental Protection Agency Region V 230 South Dearborn Street Chicago, IL 60604

Re: Marion/Bragg CWM-ENRAC Subcontractor
for the Closure of the Marion/Bragg
Dump

Dear Mr. Schorle:

Indiana Department of Environmental Management has no objection that the PRP group of the Marion/Bragg Superfund Site has selected Chemical Waste Management ENRAC Division (CWM-ENRAC) as a contractor for the closure of the Marion/Bragg Dump.

However, there is an association of CWM-ENRAC with Central Waste Systems. Central Waste Systems is a subsidiary of Waste Management Inc. (WMI), a Potentially Responsible Party (PRP) of the Marion Bragg Superfund Site, therefore conflict of interest can occur. For this reason IDEM recommends:

- The Remedial Action (Landfill Closure) should be under thorough supervision of the EPA contractor, the Army Corps of Engineers (ACOE).
- 2. CWM ENRAC obtain written confidentiality agreements from all individuals performing work under the contract. These agreements about provide that the individuals will not disclose to Waste Management Inc., or any of its other direct or indirect subsidiaries, any information about the site, except for routine insurance information relating to billings as necessary. No detailed cost information or supporting documentation should be disclosed to WMI or any of these subsidiaries.

Yery truly yours,

Reginald O. Baker, Chief Site Management Section Office of Environmental Response

#### INDIANAPOLIS

# OFFICE MEMORANDUM

DATE:

May 9, 1989

TO:

Swapan Ghosh

Site Management Section

THRU:

Larry Studebaker X-L 5711/4.

Reggie Baker RIB 5/12

FROM:

Manuela C. Johnson Mc 5/10/89

Technical Support Section

SUBJECT:

Marion (Bragg) Landfill

Marion, Indiana; Grant County

QAPP and Health and Safety Plan Review

As per your memo dated March 22, 1989, I have reviewed the Health and Safety Plan and the Quality Assurance Project Plan (QAPP).

I have noted the following inadequacies:

In Section 4, Part 4.1 - Bioaccumulation Study, the collection of fish samples is discussed. ERM has failed to specify which species of fish would be utilized the study. Additionally, the methods of sample preparation and analysis are not discussed. A complete and separate bioaccumulation study plan should be submitted indicating locations of sampling, intended species to be sampled and reasoning for utilizing the species in the study, the sample preparation, sample analysis methodology, a listing of compounds to be analyzed and detection limits. The health and safety aspects for the bioaccumulation study were not well addressed in the Health and Safety Plan.

A complete plan should also be submitted for the biological survey. The one contained in the QAPP is not sufficient for a thorough review by biological staff.

Whenever sampling is conducted, a full QA/QC package should be submitted with the sample data for IDEM staff review.

With respect to the Health and Safety Plan, the author of the document failed to define the breathing zone. A physical description is necessary as to what is considered the breathing zone.

In Section 6 - Anticipated Personal Protective Equipment Levels for Site Activities, eye protection was not included in the list of protective equipment. It is essential that all on-site personnel are wearing eye protection of one form or another.

The use of an explosimeter is discussed in Section 9 - Site Monitoring, however; the writer failed to specify how the explosimeter would be calibrated. If the explosimeter is not calibrated with the appropriate standards, then some possibly, more explosive or flammable substances may be overlooked. Additionally, action levels for airborne contaminants are not listed.

Swapan Ghosh Page 2 May 9, 1989

In both sections concerning decontamination, the actual decontamination areas are not well described. How will decon water be collected and prevented from running off? Where on the site will the decon areas be located? Will there be one permanent area or will the decon area move with the work areas?

If an emergency should occur, whereby a worker is not decontaminated prior to being sent to the hospital, will Marion General Hospital have the capabilities to isolate and/or decontaminate the worker?

The Health and Safety Plan mentions fire extinquishers in numerous areas, however; there are not any specifications included. At a minimum, one 8A:40BC extinguisher should be provided for rapid response in the event of a flash fire.

A clarification is needed on what an excessive dust level is as described on page 12-3, and how this level shall be determined.

In Section 12.6 - Site Communication, the writer discusses locating public telephones for emergency phone calls prior to starting work. This section should include a statement that all persons working on site, shall be notified of the location of the nearest telphone to be used in the event of an emergency.

The incident report form, Exhibit 13-1, is fairly comprehensive. The individual completing the form should also include a statement as to whether the injured worker received medical attention.

The writer states that the construction materials and site refuse shall be disposed, however; the writer failed to identify how this would be accomplished. Will there a dumpster present, or will the materials simply be burn-off?

The determination of the prevailing wind direction is important, but again the author failed to identify how this will be determined. Additionally, a statement was made that cartridges for air-purifying respirators shall be changed daily at a minimum. How will it be determined if it is necessary to change the filters more frequently?

Attachment A describes the protective clothing for level B. The level B tyvek should include a hood. In addition, should not the workers not be wear steel toed boots with non-permeable surfaces?

Overall, the Plan is well written with the exception of the details I have listed. If you have any questions feel free to see me.

MCJ/alw

#### INDIANAPOLIS

OFFICE MEMORANDUM

DATE:

May 5, 1989

TO:

FROM:

Swapan Ghosh

THRU:

Reggie Baker RS 5/R

Site Management Section Doug Montgomery ()mM 5/9/59

Technical Support Section

SUBJECT:

Marion Bragg Landfill Closure

100% Plan Marion Bragg

Following your request, I have reviewed the above-named document. Comments follow:

The 72 acre former landfill is located on the southeast edge of Marion, Grant County, Indiana. About 45 acres were used as industrial and municipal landfill until closing in 1975. The landfill is bordered on the north and east by the Mississinewa River, by a cemetary on the west, and by a large pond to the south. A residence and two asphalt plants are located along the southwest corner.

The geology of the site includes two aquifers separated by a till which is 54 to 63 feet thick. The lower aquifer is limestone bedrock, at a depth of 89 to 125 feet below the surface. There is an upward flow gradient between the lower and upper aquifers shown by a 15 foot higher head in deep aquifer wells. The flow in both aquifers is toward the Mississinewa River.

The document is well written and very comprehensive. Much attention to detail is evident. The report is structured from the Remedial Action Plan (RAP) which failed to include actual remedial options should excess contamination of the river be shown. Rather than discussing remediation of ground water, the report has substituted a decision tree which requires a species count in the river followed by a possible bioaccumulation study. Should both studies prove that the river is impacted by the landfill, remediation techniques are to be proposed and evaluated and eventually selected and implemented. The closure plan should include the selected plan for remediation of ground water or attentuation of ground water migration. An actual remediation plan is needed since the travel time for ground water across the site is 2.2 years.

Page SC-3, Section 7

It is stated that decontamination water may be disposed of on-site. This is inappropriate. Developed ground water and decontamination water can be expected to show some levels of contamination. On-site disposal will contribute to the contamination of soils, surface water, or ground . water. After testing, developed water and decontamination water should be disposed of at the Public Treatment Works if water quality is acceptable.

Memo to Swapan Ghosh Page 2

Page SC-6, Section 16

The sequence of work includes fence installation and monitor well installation prior to clearing and grubbing operations. It will be necessary to clear the area for the fence and the area for the monitor wells prior to installation of the fence and monitor wells.

Page 1A-1, Section 2.1

The wording of the items to be paid by the contractor should read, "specified sample tests" rather than "specified test samples".

Page 1E-2, Section 2.2.6.2

This section says that wash water will be released on-site. This is inappropriate as previously noted.

Page 2A-1, Sections 2.1 and 2.2

These sections deal with waste removal of solid waste and potential hazardous waste. It is unclear whether encountered solid waste which is potentially hazardous will be removed to low spots or given special handling and disposal off-site.

Page 2H-2, Section 1.2.2.5

The disposal of the silt fence under the clay stockpile for future cap repair is a poor solution to the disposal problem. A permanent solution is advised.

Page 2L-4, Section 3.2.1 and 3.2.2

It is unclear whether the grasses are to be blended and applied or individually applied in separate areas.

Page 2L-5, Section 3.9.1

Maintenance is said to include weeding. It should also be stated that chemical application to eradicate weeds is not approved.

Page 2N-1, Section 1-4

The wording "Group will obtain any pay..." should read "Group will obtain and pay...".

Page 2n-1, Section 2.1.2

It is unclear how the screen size of .02 inch was determined. Likewise, the justification for the #9 gravel filter pack needs to be discussed.

Memo to Swapan Ghosh Page 3

Page 2N-3, Section 3.12

The plan to take a measurement of depth to ground water immediately after well development fails to allow for well recovery after development. A suitable time period should pass to allow for well recovery. Twenty-four hours is recommended.

DM/mlk

**INDIANAPOLIS** 

OFFICE MEMORANDUM

DATE:

October 5, 1988

TO:

Nancy A. Maloley

Commissioner

THRU:

Jacqueline Strecker

FROM:

Reggie Baker, Chief ROB 10/5

Site Management Section

SUBJECT:

Meeting with Environmental Groups

Marion/Bragg (NPL Site), Grant County

This memorandum is for information only, no action from the Commissioner's Office is required at this time.

Representatives from the Hoosier Environmental Council, the People Against Hazardous Landfills and an area resident, Ms. Marijean Stephenson, one of the originators of the petition with 700 signatures, will be meeting with the IDEM staff to discuss the Marion/Bragg Superfund site. The meeting will be held at 2 p.m. on October 6, 1988. The above-mentioned petition requests the U.S. EPA to construct a fence, but staff anticipates questions regarding all aspects of IDEM's involvement. The site was originally designated a U.S. EPA Fund Lead site and retained this status until the RI/FS was completed. The IDEM participated by reviewing and approving RI/FS reports, suggesting modifications to those documents and assuring that all the State's applicable rules are enforced.

Negotiations with the PRPs started in November 1987, two months after the ROD was signed. The PRPs agreed to implement the interim remedy selected by IDEM and EPA. The description of the remedy is attached. This remedy is protective of the human health and the environment, attains federal and State requirements that are appropriate and cost effective.

The PRPs have already signed the Consent Decree and it is anticipated that the EPA and the State will put their signatures on the documents in the near future.

It is expected that the Remedial Design will begin by the end of October and the Remedial Action will begin in the Spring of 1989. If you have any questions, please call the project manager, Swapan Ghosh at 243-5056.

SKG/cd Attachments

cc: Catherine Lynch, OEA

State Form 4336

# DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

#### **INDIANAPOLIS**

# OFFICE MEMORANDUM

DATE:

September 24, 1987

TO:

David Wagner

David wagner
Deputy Commissioner

THRU:

Glenn D. Praty

Jacqueline Stre

FROM:

Reggie Baker, Chief PDB 925 Site Management Section, OER

SUBJECT:

Marion/Bragg Selected Remedy Questions

During the selected remedy presentation on the Marion/Bragg Dump by Site Manager Swapan Ghosh, you raised several questions concerning the future use of the landfill site.

The following comments are given in response to your questions:

- (1) The selected remedy has no provisions for any deed or land use restrictions, as U.S. EPA nor the State have mechanisms to enforce such restrictions. The prime consideration for any future use is maintaining the integrity of the landfill cap.
- (2) The selected remedy does include site access restrictions. The entire site will be fenced to reduce the potential for cap degradation and also block access to the pond which is a potential pathway of exposure because it is leachate enriched.
- (3) The cost of backfilling the pond is approximately 16 million dollars and is not seen as cost effective. The additional State match would be 1.6 million.
- (4) Since this is an interim remedy with extensive sampling called for over the next five years, the elements of a permanent remedy will be revisited. There is nothing in the existing draft ROD that would preclude the PRP's from backfilling the pond with clean construction debris in the future.
- (5) Though the RI/FS did not show gross contamination in and around the site, there is ample documentation in the files to warrant considerable concern over potential releases in the future. During the peak years of operation, it is documented that 1,400 drums per month were processed for recycling. Many of the drums were partially full with solvents, plasticizers and paint wastes which were dumped into the landfill. Further, it is estimated that 3,000 drums of unknown waste are buried in that landfill. It is unknown at this time whether the codtents of those drums have migrated off the site or the waste is still contained.
- (6) The RI/FS/ROD process is not really designed to address the economic potential of a site.
- (7) Due to the many unknowns of this site, staff will not recommend any future land use of this site where the cap may be disturbed.

# ROBERT D. ORR, GOVERNOR WOODROW A. MYERS, JR., M.D., STATE HEALTH COMMISSIONER

INDIANA STATE BOARD OF HEALTH

1330 WEST MICHIGAN STREET

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Aug 10 3 32 PM '87

P.O. BOX 1964

INDIANAPOLIS, IN 46205-1964

DEMARTMENT OF ENVIRONMENTAL MARKGENERAT



July 28, 1987

TO:

Swapan Ghosh, Site Management

Indiana Department of Environmental Management

FROM:

Greg Steele, John Orr

Environmental Epidemiology
Indiana State Board of Health

SUBJECT:

N.P.L. - Marin Bragg Landfill REM II - Feasibility Study REM II - Investigation Report

Recommendations

- 1. Site should be restricted by fencing (chain link/barb wire top) and posted to indicate potential exposures to surface soils and on-site pond waters/sediments.
- 2. Sample site PW-29 should be resampled, analyzed QA/QC to affirm or discount potential cancer risk due to arsenic.
- 3. No aquatic life form taken from on-site pond should be consumed.
- 4. On-site pond should be drained, pond area backfilled, and capped in accordance with GEP.
- 5. We would also suggest the sediments be removed.
- 6. Pond and subsurface volumes should be kept from recharging by appropriate engineering practices such as grading and slurry walling.
- 7. Monitoring should be in place and data monitored to ensure no increased risk to public health.
- 8. Should levels of contamination increase, immediate remidial blockage offlow via means such as slurry wall should be accomplished.

#### INDIANAPOLIS

# OFFICE MEMORANDUM

DATE:

July 1, 1987

TO:

84.1-20 Swapan Ghosh Site Management Section

THRU:

Christa Henson CA 7-2: Karyl Schmidt K57-8-8 David Lamm por poper

Jacqueline Strecker Reggie Baker RD&

FROM:

Tom Hein Engineering Section

SUBJECT:

Engineering Review of the Feasibility Study of

Marion/Bragg Landfill

I have reviewed the Marion/Bragg Feasibility Study transmitted to this Section on June 23, 1987. In general, the extent of contamination is described consistently as only "above background levels" throughout Section 1. Introduction. The only contaminant described to be present in "concentrations 'significantly' above background concentration" is thought to originate from runoff of an off-site storage pile. The following comments are made based on the analytical reports contained in the Feasibility Study and Section 1.4.2. Extent of Contamination.

- The majority of the technologies which were assessed, (RCRA incineration, RCRA landfill, and to a lesser degree RCRA capping) are appropriate only in situations with a high degree of contamination or probability of contamination. Neither condition is demonstrated in the Marion/Bragg Feasibility Study.
- Many of the less costly remedial technologies identified in Table 3-2 appear to be more appropriate. I recommend that they too, be examined.
- No existing contour map is provided nor is the limits of landfilling clear from the maps.
- 4. The direction of groundwater flow is not shown.
- 5. The cost/benefit ratio of a sanitary landfill cap and construction of a slurry wall should also be examined more closely.
- 6. Generally, it is not a good design practice to construct a 15-acrepond in the center of a landfill. The Feasibility Study did not evaluate the contribution of the pond toward the contamination on groundwater hydraulics. It is assumed the lake is not lined, but merely a surface obtrusion of the groundwater flow.

It is impossible to conclusively evaluate whether or not to fill the pond without further evaluation.

7. The hydraulic conductivity of the uppermost aquifer is extremely high. The data from which this value was derived should be examined closely. Also, the saturated thickness and area should be examined.

8. The contamination from off-site sources may be as significant as the on-site sources.

In summary, it would be impossible to recommend any remedial action technology based on the Feasibility Study. The sampling results suggest that a less costly solution than what has been examined is appropriate.

I suggest looking at filling the pond with on-site material, if available, then recontouring the site to two to three percent slope. If continued groundwater flow through the site is expected to be a minor problem, a French-drain system to divert groundwater away from the fill area might be appropriate in lieu of a slurry wall.

If you have any questions, let me know.

TH/bw

# STATE BOARD OF HEALTH

Limit Co

#### INDIANAPOLIS

# OFFICE MEMORANDUM

DATE:

January 21, 1986

TO:

Jayne E. Browning

Remedial Response Branch

THRU:

Karyl K. Schmidt K5 1123/86

Jacqueline W. Streckers

FROM:

لسك James R. Wheat

Technical Support Branch

SUBJECT: Marion Bragg Dump Work Plan

As per your request, I have reviewed the "Marion Bragg Landfill Site Workplan, Technical Scope of Work, adated September, 1985. The site is located in the southeast edge of Marion, Indiana, in the northwest quarter of Section 16, and in parts of Sections 8, 9, and 17, Township 24 North, Range 8 East of Grant County.

The "Workplan" for Marion Bragg is reasonably comprehensive. However, there are some comments staff would like to address. The first comment is the need for more background data. Specifically, a well should be located upgradient and off-site to establish the natural background water quality data. This well should be exposed to as little contamination as possible. Secondly, Section 4.4.4 of the plan indicates a regional southwest dip for the upper bedrock. This is incorrect, the dip is northerly towards the Michigan Basin. Last, there is a need for at least one on-site deep bedrock well. Because of the sand and gravel above the 60-foot thick till confining layer, a deep well will indicate by comparison of water levels if there is a hydraulic connection between the upper and lower aquifers. The difference in the water levels between the upper and lower aquifers will indicate the magnitude of the vertical gradient. If there is a large downward vertical gradient, there may be a need for a pump test.

JRW/kp /



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# **INDIANAPOLIS**

STATE BOARD OF HEALTH AN EQUAL OFFORTUNITY EMPLOYER

August 27, 1985

Address Reply to: Indiana State Board of Health 1330 West Michigan Street P. O. Box 1964 Indianapolis, IN 46206-1964

Mr. David Barley, President-Eastside Cove 5704 Lincoln Boulevard Marion, IN 46953

Dear Mr. Barley:

Re: Eastside Cove Property

This letter is to acknowledge your telephone conversation of August 21, 1985, with Ms. Jayne E. Browning, Division of Land Pollution Control, regarding property owned by Eastside Cove.

In response to your concerns, the date for the establishment of the grid system, on the ten acres in question, has been delayed until September 9, 1985. During a two-week period, beginning September 9, 1985, sampling activities will be conducted.

Mr. Nick Longo, U.S. Environmental Protection Agency, Region V, will be at Eastside Cove on August 27, 1985, to answer any questions which you may have.

If you have any further questions concerning this matter, please contact Ms. Browning, State Project Coordinator, at AC 317/243-5144.

Very truly yours;

Acqueline W. Strecker, Chief

Remedial Response Branch

Division of Land Pollution Control

LJEB/csc

Indiana STATE



# **INDIANAPOLIS**

STATE BOARD OF HEALTH AN EQUAL OPPORTUNITY EMPLOYER

May 23, 1985 -

Address Reply to: Indiana State Board of Health 1330 West Michigan Street P.O. Box 1964 Indianapolis, IN 46206-1964

Ms. Cindy Nolan (5HR-13) Emergency and Remedial Response Branch U.S. Environmental Protection Agency 230 South Dearborn Street Chicago, IL 60604

- Dear Ms. Nolan:

The Marion-Bragg Landfill Remedial Investigation and Feasibility Study (RI/FS) Statement of Work appears to provide for a comprehensive investigation. However, we believe that certain aspects of the study warrant special emphasis. Below are a list of comments which identify those areas of concern:

- 1. Abandoned oil and gas wells of unknown completion in the vicinity of the landfill could contaminate the lower aquifer. These drill holes would allow contaminant migration vertically both upward and downward. These wells should be sampled.
- Storm or rainwater runoff during wet periods should be collected which will require sampling during and after rainstorms. Even though the major concern is the evaluation of groundwater. surface water, and soil contamination in the area near the landfill, it is possible that contaminants could enter the river during storm events.
- Standard U.S. EPA testing procedures for detecting contaminants in all matrices, particularly organics, are not always efficient: due to the loss of some volatile contaminants. Consequently, in areas of serious organic contamination, additional testing with a variety of leaching solvents might be prudent.
- Scale of the waste reported to be at the site include acetone, . paint thinners, solvents, plasticizers, as well as lead and cadmium. As far as the organic wastes are concerned, the thinners would be hydrocarbons such as naphtha, turpentine, or some other olegresinous solvent.
- Most plasticizers are phthalates, adipates, sebacate esters, and polyglycols such as ethylene glycol and its derivatives. Plasticizers such as tricresyl phosphate, castor oil and camphor may also be present.

- by gas chromatography and/or GC/MS to determine what type of organic chemicals are involved. Composite samples should be made from several drums and analyzed since there are so many drums, approximately 30,000 barrels presumed to be buried in the landfill. Care should be taken to avoid the loss of volatile constituents during the sample collection.
- 7. Trace metals could be determined by Inductively Coupled Plasmas (ICP) analysis. By using this technique many elements at one time can be determined.
- 8. Due to the nature of the landfill, i.e., buried barrels and other metals, the geophysical investigation will probably not reveal any useful subsurface information other than the definition of the landfill's boundaries.
- 9. An engineer or <u>geologist</u> shall conduct a remedial investigation necessary to characterize the site and its actual or potential hazard to the public health and environment.
- 10. If no borings are to be taken, all monitoring wells should be drilled using continuous split spoon sampling techniques.
- 11. Aquifer characteristics should be determined by pumping tests or slug tests.
- 12. In addition to the geotechnical test already prescribed, such as coefficients of permeability, grain size distributions, and cation exchange capacities, tests to determine Atterburg limits and moisture contents should also be performed.
- 13. The plan should include water table and/or potentiometric surface maps of the area underlying the site.
- 14. Geologic cross sections should be provided.
- 15. Horizontal and vertical components of groundwater flow should be addressed.
- 16. Agaifer characteristics such as thickness, extent, storativity, transmissivity, hydraulic conductivity, confining layers, and flow rate should be identified.
- 17. Information on monitoring well design and construction such as drilling techniques, well development and material usage in addition to data on well location and both length and elevation of screening intervals should be forthcoming.

- 18. Surface water and groundwater hydraulic connections should be located.
- 19. A summary of geologic information obtained from recent or previous soil borings, area well logs and/or published reports needs to be prepared.

Finally, please be informed that Ms. Jayne Browning is the new State Project Coordinator for the Marion-Bragg Dump. Her number is AC 317/243-5144.

Very truly yours,

Jacque line W. Strecker, Chief

Remedial Response Branch

Division of Land Pollution Control

JB/sk

Selected Site History Document Summary...

## Marion/Bragg Dump...

#### Site Discovery:

June 9, 1971 - U. S. Environmental Protection Agency Notification of Hazardous Waste Site by RCA Corporation, Picture Tube Division, 3301 South Adams, Marion, Indiana of the R. L. Yount Property site, 2627-2629 Central Avenue, Marion, Indiana (Marion/Bragg Dump, IND980607709). John Hensley, Manager Plant Engineering, was listed as the Person to Contact. Dates of Waste Handling ranged from "1949 to 1970" and included Waste Types such as Heavy Metals, Plant trash & paper, and Source Waste form Standard Industrial Classification Code 3672, {Establishments primarily engaged in manufacturing Electronic Components and Accessories such as: Cathode Ray Television Picture Tubes & Picture Tube Reprocessing, Television Receiving Type Cathode Ray Tubes}.

#### <u>Detailed Site History</u>:

July 11, 1949 - Indiana Geological Survey inspection report of Indiana Sand and Gravel Pits lists information on a sand & gravel pit 1/4 mi east of Marion, Township 24N, Range 8E, Section 16, located on the McClain Estate of 72 acres. [This is believed to be the off-site pond.] The owner and operator the sand & gravel pit was Western Indiana Gravel Company, Rural Route 5, Box 374, Marion, Indiana. The Plant Superintendent was Max A. Harris. The gravel pit in the valley terrace of the Mississinewa sluiceway was opened 12 years earlier in 1937 by Western Indiana Gravel Company and produced 100 tons/hour. The 1500' x 1100' pit was excavated 30 feet down to Wisconsin till hardpan. Overburden thickness was 4 feet, gravel thickness was 25 feet and produced a ratio of 60% gravel. The pit is listed as closed in May of 1951 and reported abandoned on December 29, 1951. Geologist: D. R. Coats.

January 31, 1967 - Indiana State Board of Health imposed six conditions upon the sanitary landfill site operated by Mr. Richard Gamrath (900 Waugh Street, Kokomo), located on the southeast side of Marion on the west side of the Mississinewa River. The conditions included prohibition of: current open burning, and the disposal of ten to twelve barrels per day containing various organic chemicals and solvents from General Tire Company of Marion.

January 3, 1969 - Clifford Bragg, Grant County Sanitarian, notes findings of the 2:00 p.m. Friday, January 3, 1967 inspection of a landfill operated by Delmar Bragg. The findings included: paper & debris being scattered over a large area of the landfill site, enormous mounds of cans and garbage uncovered, and the concern of a breeding place for rats & vermin.

January 17, 1969 - Clifford Bragg, Grant County Sanitarian, contacts Mrs. Mildred Stanton owner of land that the City landfill is situated upon. Mrs. Stanton states that; "the operator of the landfill, Mr. Delmar Bragg, does not have a contract with her." The City was unaware of this even though they held a contract with Delmar Bragg to operate the City landfill according to Mr. Charles Esler, City Board of Works of Marion.

June 23, 1969 - Clifford Bragg, Grant County Sanitarian, field notes detail disposal of large quantities of Marion's sewage sludge in a pit used for disposal of glass from RCA. Gate man at the landfill states that the liquid was "oil". The pit was located east of the Marion Paving Company (this is believed to be in the area where Dobson Construction Company is now located and operating). The inspection findings make reference to a 1968 Summer fire at the Bragg Dump which took two weeks to control. Clifford Bragg, Grant County Sanitarian, informed the gate man at the landfill that he was "not to permit any material from the Sewage Department to be placed in the area until a letter from the Indiana State Board of Health's Stream Pollution Control Board was received."

February 4, 1971 - Inspection of the Marion/ Bragg Dump made by the Indiana State Board of Health.

February 26, 1971 - Indiana State Board of Health recommendations to Delmar Bragg include: that he locate another sanitary landfill site, abandon the existing site as soon as possible, cover the top & sides of the site with two feet of relatively impermeable soil, and install fencing.

June 9, 1971 - U. S. Environmental Protection Agency Notification of Hazardous Waste Site by RCA Corporation, Picture Tube Division, 3301 South Adams, Marion, Indiana of the R. L. Yount Property site, 2627-2629 Central Avenue, Marion, Indiana (Marion/Bragg Dump, IND980607709). John Hensley, Manager Plant Engineering, was listed as the Person to Contact. Dates of Waste Handling ranged from "1949 to 1970" and included Waste Types such as Heavy Metals, Plant trash & paper, and Source Waste form Standard Industrial Classification Code 3672, {Establishments primarily engaged in manufacturing Electronic Components and Accessories such as: Cathode Ray Television Picture Tubes & Picture Tube Reprocessing, Television Receiving Type Cathode Ray Tubes}.

January 26, 1972 - Inspection by the Indiana State Board of Health recommends closure of the Bragg Dump based upon the following deficiencies: soils not of a type to prevent leaching; distance from water not adequate; base of operations not adequately above groundwater table, trenching or filling too deep to avoid contamination of groundwater; and refuse dumped in water. Additional comments noted that gravel pits were being filled and cover material was inadequate.

May 9, 1972 - Inspection of the Marion/ Bragg Dump made by the Indiana State Board of Health and Grant County Health Department.

May 23, 1972 - Indiana State Board of Health letter to Mr. Delmar Bragg (Route 1, Van Buren, IN), notes several deficiencies from the May 9, 1972, inspection including: operations of the site are unacceptable and the site should be abandoned as soon a possible; refuse was being deposited in standing water; refuse was not being compacted and covered daily; soils being used for cover are high in sand and gravel; and liquid sewage was being deposited along with refuge.

August 15, 1972 - Indiana State Board of Health inspection reveals 30 barrels of black solvent sludge and grayish powder from General Tire disposed of at the Bragg Dump.

September 26, 1972 - Inspection of the Marion/ Bragg Dump by the Indiana State Board of Health and Grant County Health Department note deficiencies including: no approval, no permit, cover not adequate, size of working face too large, accumulation of salvage materials, surface drainage problems, insect problems, refuse dumped in water.

October 20, 1972 - Indiana State Board of Health letter to Marion's Mayor Raymond Burns noted that operations of the site continue in an unacceptable manner and that use of the Bragg Dump as a landfill site must be discontinued by January 1, 1973.

December 11, 1972 - Inspection of the Marion/ Bragg Dump made by the Indiana State Board of Health.

December 18, 1972 - Delmar W. Bragg, President, Bragg Construction Company and operator of the Bragg Dump responds to the Indiana State Board of Health by saying; "As the location of this site is unacceptable it is our intention to phase it out in 1973."

February 7, 1973 - Indiana State Board of Health memo notes Cliff Bragg's desire to take Marion's Sewage Treatment Plant sludge to the Bragg landfill and that; "He still is hot to get an approval for a landfill operation in one of the abandoned gravel pits southeast of the present site." The Indiana State Board of Health indicates that the site is not acceptable.

February 12, 1973 - John R.Snell Engineers Inc. letter to Indiana State Board of Health notes that the Bragg Dump receives approximately 4,400 tons of industrial refuse per month not including garbage or any commercial waste being discharged into the landfill. The letter also details the need of Marion's Wastewater Treatment facility to dispose of 100 to 120 tons per day of digested sludge at the Bragg Dump.

March 20, 1973 - Indiana State Board of Health letter to Mr.John C.O'Malia of John R.Snell Engineers Inc. notes no objection to the proposal of the Bragg Dump to be used for disposal of Marion's Wastewater Treatment sewage sludge on an interim emergency basis provided conditions are complied with such as: no sludge run-off, immediate cover, and use of the landfill only when land application and drying bed capacity is not feasible.

June 20, 1973 - Joseph C.Homer, City Engineer, letter to Mr. Arden W. Zobroski, City Attorney detailing a description of real estate "for lease purposes only" regarding a 102 acre extension of sanitary landfill operation south of the Bragg Dump.

July 31, 1973 - Marion Mayor Mr. Raymond Burns requests Indiana State Board of Health approval of a proposed new disposal site south of the Bragg Dump.

August 9, 1973 - Indiana State Board of Health letter to Delmar Bragg regarding the Bragg Dump notes the observations of an August 1, 1973 inspection including: odor problem, no approval of the landfill operation; portions of the site had insufficient cover and much exposed refuse; soils used for cover are high in sand and gravel; industrial waste sludges were being disposed over the surface of the site; site is leaching into the adjacent water-filled pit. The letter questions Mr. Bragg as to information received from him on December 21, 1972 indicating site phase-out during 1973 and note that; "the year was more than half over while operations at this site continue."

August 9, 1973 - Indiana State Board of Health letter to Marion's Mayor Raymond Burns details an inspection of the proposed 102-acre extension of the Bragg Dump. Findings of staff geologist indicate that the site is generally unsuitable for refuse disposal due to the fact that the soils are high in granule materials and the lack of available cover materials. The letter further states; "A refuse disposal operation at this site cannot be approved."

August 20, 1973 - Indiana State Board of Health memorandum notes the acceptance of 1,400 fifty five gallon drums per month from General Tire through Central Waste Inc. Waste types noted consist of: acetone, plasticizers, lacquer thinners, enamels. Other wastes hauted by Central Waste Inc. included sludge high in cadmium and lead from RCA.

October 23. 1973 - Indiana State Board of Health letter to Delmar Bragg establishes a March 1, 1974 deadline to cease operations at the Bragg Dump site.

October 25, 1973 - Indiana State Board of Health letter to Delmar Bragg references an effort to resolve the Bragg Dump's hazardous waste problem. Contacts were made to General Tire Company, Central Waste Company, Inc., and RCA. Delmar Bragg was directed to not accept any more volatile liquids for disposal, or any wastes from RCA. The letter further states that after a review of the soils information that the state cannot authorize expansion of the Bragg Dump into the adjacent mined out gravel pit and reiterates the general unsuitability of this area for a sanitary landfill operation. Delmar Bragg is instructed that operations at the existing site must cease by March 1,1974.

February 1, 1974 - Indiana State Board of Health inspection observes refuse being deposited without cover and continued acceptance of liquid wastes, sludge deposit area had no cover and questions the status of compliance with the March 1, 1974 deadline to cease operations at the Bragg Dump site. Overall operations at the site are rated as unacceptable and the site is rated as poor.

February 22, 1974 - Indiana State Board of Health letter notes February 1, 1974 inspection observations and questions Delmar Bragg on the status of compliance with the March 1, 1974 deadline to end operations at the Bragg Dump site.

April 3, 1974 - Indiana State Board of Health inspection observes continued deficiencies at the Marion/Bragg Dump site.

May 3, 1974 and July 25, 1974 - Indiana State Board of Health inspections note operating deficiencies including: inadequate cover; cover materials not available; onsite roads not adequate; past and present open burning; lack of control of blowing paper; size of working face too large; visibly leaching into north pond; large number of birds; odor problem. Inspection also detailed that the site is only receiving about one to two inches of cover per month and recommended that water samples should be taken from on-site and nearby ponds.

May 23, 1974 - Indiana State Board of Health letter informs Delmar Bragg of May 3, 1974 inspection and requests written response with in two weeks of plans to correct his violation of the Refuse Disposal Act by exceeding the March 1, 1974 deadline for cessation of operations at the site.

September 16, 1974 - Marion's Mayor W. Ray Burns letter to Attorney David Kiley regarding proposed 102-acre disposal site asks for Mr.Kiley's earliest attention to this matter "As we find ourselves in dire need of a new landfill." Even though informed by the Indiana State Board of Health on August 9, 1973, that; "A refuse disposal operation at this site cannot be approved," Mayor Burns states in his letter that; "I feel this new site is in compliance with the requirements for the sanitary landfill as required by the Indiana State Board of Health."

October 21, 1974 - Area Board of Zoning Appeals of Grant County approves a Special Exception Petition for a 102-acre sanitary landfill by Bragg Construction, Inc. and Burley Gillespie Estate. The Industrial Reserve and Flood Plain zoned approval was given subject to 14 restrictions which included: the project to be approved in phases, the first containing 10-acres; and also requiring approval of other governing agencies such as Stream Pollution Control Board, County Drainage Board, Indiana Natural Resources Commission, Indiana State Board of Health, and the Grant County Health Board.

December 12, 1974 - Indiana State Board of Health inspection notes include: refuse getting into the on-site pond and leaching into said pond; area method of disposal being used without any apparent pattern; lack of daily cover; and that no plan of operation to determine final elevations and final cover had been done. In addition the report notes barrels from General Tire and RCA and industrial wastes from Foster Forbes, Fisher Body, Dana, Atlas Foundry, and Essex Wire.

December 17, 1974 - Marion Mayor W. Ray Burns sends letter to Indiana State Board of Health regarding proposed sanitary landfill at Central Avenue in Marion next to the Bragg Dump. The letter requests Indiana Stream Pollution Control Board approval of the proposed 102 acre sanitary landfill site.

December 30, 1974, & January 2, 1975 - Indiana Stream Pollution Control Board replies to Mayor Burns' 12/17/74 letter. The State cites lack of detailed soil borings, a proposed method of operation, plot plans, and a proposal for a sanitary landfill. The State also notes that on August 1, 1973, staff geologist inspected the site and indicated the general unsuitability of the site for refuse disposal because of granule soils and lack of available cover material.

January 3, 1975 - Certified letter sent to Delmar Bragg from Indiana Stream Pollution Control Board regarding open dump operation on Central Avenue in Marion. The letter states that; "All dumping operations at this site must cease by February 15, 1975 and the refuse directed to an approved sanitary landfill site." The letter further states observations of December 12, 1974 found refuse being deposited without compaction or cover, hazardous wastes being accepted, the site was visibly leaching, and that operations at the site were unsatisfactory and were in violation of the Environmental Management Act and the Refuse Disposal Act.

January 21, 1975 - Indiana Department of Natural Resources letter to Marion Mayor W. Ray Burns states that; "It has been brought to our attention that construction of a sanitary landfill has begun in the floodway of the Mississinewa River, in the NW 1/4 of Section 16, T. 24 N., R. 8 E., on Central Avenue at the City of Marion, Grant County, Indiana." The IDNR notes that the work has not received prior approval and that; "The construction of this project is without Commission approval and is in direct violation of Indiana State law. Therefore, all construction activities must stop immediately and remain stopped until the proper approval is received."

January 28, 1975 - Delmar Bragg, President, Bragg Construction Company, writes the Indiana Stream Pollution Control Board stating that; "We have a closing date for the present landfill of June 1, 1975," and that; "We are doing our best to operate in a sanitary manner but under the present conditions we cannot meet the State requirements."

January 30, 1975 - Indiana State Board of Health informs both Delmar Bragg and Mayor Burns that a time extension to allow the dump to continue operating beyond the February 15, 1975, closure deadline is not warranted.

February 15, 1975 - Mrs. Edwin Cartwright of 3512 Central Avenue, Marion, writes the Indiana State Board of Health Sanitary Engineering Division regarding closure of the county landfill (Marion/Bragg Dump), detailing concerns about lack of cover, filling of the water holes, frequent fires at the dump, rats, Mr. Bragg's operating an open dump, and residents dependence on well water.

February 17, 1975 - Certified letter from Indiana Stream Pollution Control Board to Mr. Delmar Bragg confirms a February 14, 1975 meeting between Marion Mayor W. Ray Burns, Mrs. Betty Brovont of the Grant County Plan Commission, Clifford Bragg the Grant County Sanitarian, Delmar Bragg operator of the Marion/Bragg Dump, Messrs. Folmer and Kai Nyby of Waste Management Inc., and Mr. Brian Opel of the Indiana State Board of Health's Solid Waste Management Section concerning the solid waste management alternatives available to Marion and Grant County. It was concluded at the meeting that for the next one to two years, use of existing approved sanitary landfill outside Grant County was the only feasible alternative. It was agreed that a plan will be submitted to the Indiana Stream Pollution Control Board by February 28, 1975 detailing which approved sanitary landfill plus what means of transporting the refuse to that site will be utilized beginning approximately April 1, 1975. The plan was to be jointly submitted by the Mayor of Marion, the Marion City Council President, Mr. Delmar Bragg, and "the party which will work with Mr. Bragg in implementation of the plan." The State agreed to consider an additional limited extension of time (to February 28, 1975) for continued operation of the Central Avenue site upon receipt of the completed plan. The letter further stated that; "After February 28, 1975, no hazardous wastes, as defined by Regulation SPC 18, are to be deposited at the Central Avenue site.\*

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February 19, 1975 - Certified letter from Indiana Stream Pollution Control Board sent to Marion Mayor W. Ray Burns confirming the above detailed February 14, 1975 meeting.

February 26, 1975 - Marion Mayor W. Ray Burns sends letter to Indiana Stream Pollution Control Board regarding possible use of the "Gillespie property" (proposed sanitary landfill) at Central Avenue in Marion next to the Bragg Dump.

March 17, 1975 - The Stream Pollution Control Board responds to Mayor Burns' February 26, 1975 letter noting discussions with City Engineer Ray Richards and City Attorney James Browne on March 11, 1975 regarding; "possible use of the "Gillespie property" immediately south of Delmar Bragg's existing open dump operation." The response states; "the staff recommendation to the Stream Pollution Control Board must be for disapproval of any plans submitted for the subject site. On the basis of policy statement 75-1, plus the need for extensive engineering for site preparation, it is our opinion that the site warrants no further investigation or expenditures," and that; "The discussions with Mr. Richards have led to the conclusion that use of a transfer station is the best short-term alternative." The letter requests documentation of prompt advertising for satisfactory bid specifications for the transfer station.

April 24, 1975 - The Marion Board of Works and Safety receives sealed bids at the Mayor's office for the furnishing, operating, and maintaining of facilities, either a transfer station or a landfill. The Notice to Bidders cites a report by John R. Snell Engineers, Inc. completed in August 1974 entitled "Marion-Grant County Plans for Solid Waste Management" detailing the approximate quantities of solid waste delivered to the Marion/Bragg Dump. Total receipts for the Marion/Bragg Dump equaled 103,200 tons of solid waste per year plus and additional amount of Marion's Sewage Treatment Plant sludge. In 1974 Marion's Sewage Treatment Plant generated approximately 26,390 tons of liquid digested sludge (13.6% solids).

May 29, 1975 - Indiana Stream Pollution Control Board's certified letter to Mr. Delmar Bragg states that due to continued violations of the Environmental Management Act of 1971 and the Refuse Disposal Act of 1971; "All disposal operations at this site must cease by July 5, 1975. By August 15, 1975, all refuse on site must be compacted and covered with a minimum of two feet of clay-type soil, the site seeded, and a plot plan of the site must be submitted to the County and City Recorders Office."

June 5, 1975 - John D. Raikos, attorney for Miller Landfill Corporation writes a letter to Marion's Mayor Burns which cites an expenditure of \$41,000 on the John R. Snell Engineers, Inc. report. The report's recommendation of Site #3 (the Miller Landfill site) as the best straight landfill site as used as justification for acceptance of the Millers' bid for disposal of refuse at \$2.80 per ton. The letter states that the Miller Landfill Corporation is left with "no alternative but to file a class action on behalf of the taxpayers to recover the \$41,000 from you, Ray Richards, Glenn Futrell and all others who approved the expenditure and who sit or sat on the Area Plan Commission."

June 18, 1975 - Marion Mayor W. Ray Burns' letter to Indiana Stream Pollution Control Board details the June 17th entering into a contract of the City with Waste Reduction Systems, a division of Decatur Salvage Inc. Their operations will be under the direction of Mr. Ralph Sills, Manager, and Mr. Edward Imel, President of the firm. The intent is for Waste Reduction to construct a transfer station on the premises presently leased to Mr. Bragg and transfer the compacted refuse to the approved landfill in Wabash. The station could be completed and ready for operation within sixty days; based upon this, "we are requesting an extension of the present termination date of July 1st to September 1, 1975." The letter also requests that the compaction and seeding date deadlines be extended to October 15, 1975.

{Edward T. Imel, (RR 3, P O Box 133), President, Decatur Salvage, Inc., (710 West Monroe Street), Decatur, IN 46733; Incorporated on January 29, 1964, By Edward T. Imel, President; Zanta Imel, Secretary - Treasurer; and Larry A. Imel, (4024 South Clinton Street, Fort Wayne, IN), Vice-President; notary: Lewis L. Smith; instrument prepared by Lewis L. Smith, Attorney, member of the Adams County Bar Association}

July 9, 1975 - Indiana Stream Pollution Control Board certified letter to Mr. Ralph D.Sills, Manager, Waste Reduction Systems, Inc., approves the plans and specifications for the transfer station at the site of the existing Marion/Bragg Dump. The letter notes the transfer of refuse via seventy cubic yard transfer trailers to the Dunn Landfill north of Wabash and extends the termination date for the Marion/Bragg Dump to August 15, 1975.

August 15, 1975 - Indiana State Board of Health inspection notes black solvent bearing sludge and grayish powder in barrels coming from General Tire. The inspection cites an overall evaluation of operations as unacceptable and an overall evaluation of the site as poor.

September 3, 1975 - Indiana State Board of Health memorandum from Rolland P. Dove to Brain W. Opel requests attendance at a legislative hearing scheduled for Sept.11, 1975. At the hearing scheduled by Representative Mendle E. Adams, representatives of the City of Marion, Grant County, Chamber of Commerce, Area Plan Commission, City Engineers Office, and other civic groups, make statements regarding the old Marion dump and proposed new refuse disposal sites.

October 15, 1975 - Richard Yount acquires 72 acres more or less in Township 24N, Range 8E (site of Marion/ Bragg Dump).

November 18, 1975 - Indiana State Board of Health letter from David D. Lamm to Ms. Vickie Braglin notes that; "The first reference in our files to the Bragg site is an inspection made on February 4, 1971. The deficiencies noted were: 1) The top and sides of the fill were not covered with at least two feet of soil and that a mixture of gravel and sand should not be used for cover material because of unrestricted leachate movement, 2) Blowing paper (litter) was quite a problem, 3) The dump site was found to be in the floodplain of the Mississinewa River. Possible pollution by leachable substances from the dump was feared." The letter further notes that a May 9, 1972 inspection discovered the first of many incidents in which an unauthorized hazardous waste was dumped at the Bragg site and that after a geological inspection made on August 9, 1973 the site was found to be unapprovable for a landfill. Other inspections made note of visible leaching and fires on site.

December 24, 1975 - Indiana Stream Pollution Control Board letter to Mr. Ralph Sills, Waste Reduction System denies approval of a refuse processing facility operating permit for the transfer station located on Central Avenue. The letter cites an October 17, 1975 notification that the operation was in violation of Regulation SPC-18, the Environmental Management Act, and the Refuse Disposal Act. Reinspection on December 12, 1975 revealed continuing violations including: the site does not hold a valid operating permit and yet it is in operation; refuse accepted at transfer station is not removed from the site by the end of the day on which it was received; and that some of the materials received by the transfer station are being landfilled at this site.

April 6, 1976 - Indiana State Board of Health inspection of Waste Reduction System's transfer station notes numerous operating deficiencies and recommends that the site be permanently closed.

April 14, 1976 - Indiana State Board of Health Certified letter notifies Mr. Edward Imel, of Waste Reduction Systems that; "Failure to bring this operation into compliance by April 26, 1976 and maintain it at a high standards of quality will compel this office to deny your second operating permit application dated February 13, 1976, and permanently close this facility." The notice cites an April 6, 1976 inspection of the Waste Reduction Systems Transfer Station in Marion which found violations of the Environmental Management Act, the Refuse Disposal Act, and the construction permit including: "chemical waste (barrels) of unknown content and origin were accepted, 8-10 loads of plastic & assorted refuse were deposited along side the transfer station, large wooden discs & scattered refuse remain on site, and refuse was piled to approximately 50 feet in front of the transfer building with no possibility of removal by 5:00 p.m., closing time."

May 10 &19,1976 - The Grant County Area Board of Zoning Appeals favorably approves a Special Exception for Paul E. & Mary Gillespie's Outdoor Commercial Recreational Enterprise known as "The Patch" on 99.9 acres south of the Marion/Bragg Dump.

October 19, 1976 - Indiana State Board of Health memorandum concerns a, October 18, 1976 telephone call from Dick Kisler, of Levin & Sons, Fort Wayne, to George Dayhuff, Indiana State Board of Health, regarding disposal of resin wastes from the RCA plant in Marion. The memorandum states; "Kisler said that about the time that the Marion dump was closed, RCA asked Levin, who was hauling their solid waste, if they could also dispose of their liquid waste. Levin said they could not so RCA contracted with Central Waste for liquids, but one item was added to the list of solid waste Levin was hauling. That item was a hardened resin." "Levin took this waste, which was in 55-gallon barrels, to the Springvalley Landfill, the Graves Landfill, and the Huntington County Landfill. Each of these landfills refused to take this waste after they found that many of the barrels contained liquid." "From what Kisler told me RCA had, until the fall of 1975, disposed of their liquid wastes at the Marion dump in Grant County. At present Central Waste is believed to be hauling RCA's liquid wastes to C.I.D. Landfill in Chicago." The Memorandum also notes that; "A thorough investigation of the RCA waste (resins) should be undertaken before we give it an approval."

June 30, 1977 - Indiana State Board of Health inspects the Marion Transfer Station operated by Waste Reduction Systems noting several discrepancies and terms the operations unacceptable. This is scheduled to be the last day of operations since the City has decided to haul refuse to the Graves Sanitary Landfill.

September 20, 1979 - Marion/Bragg Dump Microdeed 79/2188 lists Grantees as Richard Yount & Ruthadel Yount and Grantor as Richard Yount.

January 14, 1980 - Indiana State Board of Health inspection of the Marion Transfer Station determines that the site has been closed in a satisfactory manner.

March 24, 1980 - Indiana State Board of Health letter notifies Waste Reduction Systems of the results of the January 14, 1980 inspection.

June 9, 1981 - U. S. Environmental Protection Agency Notification of Hazardous Waste Site by RCA Corporation, Picture Tube Division, 3301 South Adams, Marion, Indiana of the R. L. Yount Property, 2627-2629 Central Avenue, Marion, Indiana (Marion/Bragg Dump, IND980607709) site. John Hensley, Manager Plant Engineering, was listed as the Person to Contact. Dates of Waste Handling ranged from "1949 to 1970" and included Waste Types such as Heavy Metals, Plant trash & paper, and Source Waste form Standard Industrial Classification Code 3672, {Establishments primarily engaged in manufacturing Electronic Components and Accessories such as: Cathode Ray Television Picture Tubes & Picture Tube Reprocessing, Television Receiving Type Cathode Ray Tubes}. RCA leased specific locations "small pockets" within the abandoned gravel pit for miscellaneous solid wastes from the manufacture of television picture tubes. Part of the former RCA fill sites were covered by the City for a municipal landfill and part were covered by storage areas of an asphalt paving mix plant.

April 30, 1982 - Ecology and Environment, Inc. prepares a site safety plan for FIT investigative activities to be conducted at the site in the near future.

May 4, 1982 - Ecology and Environment, Inc. visits the Marion/Bragg Dump site and collects Mississinewa River samples upstream and downstream of the site. Leachate and leachate stains are observed along the river.

June 30, 1982 - Three monitoring wells are drilled on the Marion/Bragg Dump site. Soil samples from the borings consist mainly of sand and gravel. None of the wells penetrate to the bedrock.

July 14, 1982 - Groundwater samples are collected from three monitoring wells at the Marion/Bragg Dump site.

July 28, 1982 - Jim Knoy, Indiana State Board of Health, ranks the Marion (Bragg) Dump in Grant County, Indiana using the Hazard Ranking Score system and scores the site with a SM = 35.25 and SDC = 62.5.

The site is described as an "abandoned facility" which "accepted large volumes of hazardous wastes, surface runoff contamination has been documented." The HRS Cover Sheet notes; "Further ground water tests may be necessary."

December 21, 1982 - The Marion Chronicle-Tribune reports that the Marion/Bragg Dump has been included in the list of 418 hazardous waste sites to be examined under Superfund.

May 20, 1983 - CH2M Hill memorandum from John Martinsen, Remedial Site Project Manager regarding a May 16, 1983 site visit of the Bragg landfill in Marion, IN with Chris Oppy, Indiana State Board of Health. The memorandum details observations including: unrestricted access at several points; lack of signs indicating hazards or to instruct outsiders to keep away; numerous places along the Mississinewa River where purple leachate was seeping from the bank into the river; extension of the landfill to within 15-20 feet of the river's edge where an old uncapped well (10" diameter) and a newer 4" were found; isolated spots between Central Avenue and the river where refuse and debris had been dumped and covered made the precise perimeter of the Bragg landfill undiscernible; poor cover of the landfill area is sandy material; numerous places where debris including 55-gallon drums (many of which had leaked a green and/or black material) protrude from the fill; portions of the area are used for recreational purposes including fishing and boating; and operating asphalt plant just north of the fill area; and a small Indiana State Highway Department testing lab located on Central Avenue near the entrance to the site.

June 23, 1983 - Indiana State Board of Health responds to citizen concerns of Sally Herring.

July 1983 - Mrs. Karen Evans, Indiana State Board of Health's Division of Land Pollution Control, responds to a request from Mr. Mike O'Toole, U.S. EPA Region V, regarding State comments on the draft Remedial Action Master Plan (RAMP) for the Marion/Bragg Dump.

September 8, 1983 - Indiana State Board of Health's Division of Land Pollution Control memorandum concerns the Responsible Party Search on the Marion/Bragg Dump.

September 12, 1983 - Remedial Action Master Plan (RAMP) is finalized.

December 1, 1983 - Indiana State Board of Health's Division of Land Pollution Control memorandum contains maps and handwritten notes made by Ms. Sherry Evans-Carmichael during a review of the Grant County Health Department's tax files on the Marion/Bragg Dump site.

February 17, 1984 - Mr. Brian Eaton, TechLaw, Inc., letter requests verification of the Marion/Bragg Dump site boundaries from Ms. Sherry Evans-Carmichael. This is to be accomplished by comparison of the information obtained from the Grant County Tax Office records to the legal description provided by the Grant County Area Planning Commission to confirm whether or not the property does indeed cover the entire landfill site.

March 20, 1984 - Ms. Sherry Evans-Carmichael, Indiana State Board of Health Division of Land Pollution Control, telephone conversation with Mr. Frank Morris, Marion Chronicle-Tribune, requests needed information on the Responsible Party Search being conducted on the Marion/Bragg Dump and on the 3012 Program, which is designed to investigate abandoned disposal sites and determine whether or not the site has the potential to become a Superfund site. The name of the contractor doing the Responsible Party search was TechLaw, Inc., 12011 Lee-Jackson Highway, Suite 503, Fairfax, VA, 22033.

April 30, 1984 - CERCLA site inspection report.

May 1, 1984 - Mr. Michael Dalton & Ms. Sherry Evans-Carmichael of the Indiana State Board of Health Division of Land Pollution Control conduct a site inspection with property owner Richard Yount of the Marion/Bragg Dump. Inspection report findings included: location of wells on-site; the landfill extends into the Mississinewa River at some points on the northeast side of the site; the integrity of the final cover had not been maintained; tires, demolition debris, trash, drums and other refuse were scattered across the site and on the edges of the fill area; a large number of drums protruded from the edge of the fill on the southeast corner of the site; large objects that appeared to be some type of industrial mold were scattered throughout the site; erosion was severe on some areas of the site; and that the exact boundaries of the landfill are difficult to determine from the available information. Most of the filling appeared to have been on the Yount property, but on the southeast corner of the site, the fill area could extend on to the property owned by Mary Etta & Paul Gillespie. The inspection also noted that; "A variety of wildlife apparently lives on the site." Canada geese with 12 goslings and several other species of birds were observed, and Mr. Yount indicated to the inspectors that the north (on-site) pond had been used for fishing where a variety of different types of fish had been caught. A small stream of water was observed flowing from a conduit east of the asphalt company into the north pond which had the presence of a strong chemical smell. The inspection memorandum suggested conducting a wildlife study as part of the Remedial Investigation. Mr. Yount indicated that he had inherited the property and was concerned with his potential liability as the property owner.

July 1984 - Indiana State Board of Health Division of Land Pollution Control receives finalized Responsible Party Search report from TechLaw Inc., for the Marion/Bragg Dump. This report has been categorized as "NOT FOR RELEASE OR QUOTE" and is not available for public view, due to potential cost recovery enforcement action.

July 10, 1984 - Site Management Plan milestone chart.

July 18, 1984 - Telephone call from Mr. Mike O'Toole, U.S. EPA Region V, to Ms. Sherry Evans-Carmichael, Indiana State Board of Health Division of Land Pollution Control, advises her of a change in the projected costs of the Remedial Investigation/Feasibility Study (RI/FS) for the Marion/Bragg Dump. Prior to U.S. EPA obligating the funds, the State of Indiana must assure a 10% match for the costs of designing and constructing Remedial Action.

September 17, 1984 - Letter to the State of Indiana from Mr. Basil G. Constantelos, EPA, notifying the State of the proposed Remedial Investigation and Feasibility Study (RI/FS) which was to be funded by the U.S. Environmental Protection Agency (U.S.EPA) on the Marion/Bragg Dump Superfund site. The project was subject to the State Intergovernmental Review Process and allowed for a sixty day comment period. The Marion/Bragg Dump site was ranked in Group 7 of the National Priorities List. The letter notes the observation of leachate on the southeast side of the landfill and a primary concern of the threat of groundwater contamination since approximately 3,000 people live within one mile of the site and draw their water from an aquifer 20-25 feet below the site. Estimated costs of the RI/FS was \$450,000 with a project site activity start date of March 1986 and project completion date of September 1986.

September 19, 1984 - Letter from Mr. Mike O'Toole, U.S. EPA Region V, to Ms. Sherry Evans-Carmichael, Indiana State Board of Health Division of Land Pollution Control, advises her of upcoming activities at the Marion/Bragg Dump site.

October 16, 1984 - Telephone conference call from Ms. Jacqueline Strecker and Ms. Sherry Evans-Carmichael, Indiana State Board of Health Division of Land Pollution Control, to Mr. Russel Diefenbach, U.S. EPA Region V, recommends the Marion/Bragg Dump, Elkhart Main Street Well Field and American Chemical Services sites as candidates for cleanup activities by an organization called Clean Sites, Inc.

November 1984 - Indiana State Board of Health Division of Water Pollution Control samples residential well of Philip Rust.

November 30, 1984 - Telephone call from citizen Mrs. Sally Herring to Ms. Sherry Evans-Carmichael, Indiana State Board of Health Division of Land Pollution Control, concerns the immediate threat of groundwater contamination from the Marion/Bragg Dump site.

November 30, 1984 - Telephone call from Ms. Sherry Evans-Carmichael, Indiana State Board of Health Division of Land Pollution Control, to Mr. Mike O'Toole, U.S. EPA Region V, concerning conversation with Mrs. Sally Herring about groundwater contamination at the Marion/Bragg Dump site. Mrs. Herring is to be included in the Public Participation Plan as a concerned citizen and will receive periodic updates on site activities during the RI/FS. "Mike also said that Larry Kyte is the attorney (EPA) for this site. He also wanted to know if the RAMP (slightly revised) would be acceptable as a Scope of Work (SOW) for the site, as far as the State was concerned."

January 17, 1985 - Telephone call from U.S. EPA Region V, to Indiana State Board of Health Division of Land Pollution Control advises that Ms. Cindy Nolan, EPA, is the new-site Project Officer for the Marion/Bragg Dump. Mr. Mike O'Toole resigned his position with EPA, and now works for Chemical Waste Management, Inc. Ms. Nolan requests a letter from the State of Indiana acknowledging it's obligation to provide assurances listed in Section 104 (c)(3) of CERCLA prior to the initiation of CERCLA activities. Ms. Nolan also indicated that the first step in the RI/FS, the Statement Of Work (SOW), has been initiated.

January 30, 1985 - Indiana State Board of Health Division of Water Pollution Control resamples residential well of Philip Rust.

February 1, 1985 - Appendix A, Marion/Bragg Dump Site Chronology

February 15,1985 - Jacqueline W. Strecker, Indiana State Board of Health Division of Land Pollution Control, letter to Ms. Cindy Nolan, U.S. Environmental Protection Agency - Region V, detailing findings of the State's May 1, 1984 site inspection. Ms. Strecker indicates that; "Discussions with Mr. Chris Oppy, Indiana State Board of Health Division of Land Pollution Control, and aerial photographs suggest that approximately 10 acres in the northeast corner of the Gillespie property could be an area of concern and should be included in the Remedial Investigation for the Marion/Bragg Dump. The letter also names Mr. John Buck, Indiana State Board of Health Division of Land Pollution Control, as the State Project Officer for the site.

April 19, 1985 - Timothy L. Wilson, Indiana State Board of Health Chemical Evaluation Section, Reviews and comments on the Remedial Investigation and Feasibility Study's "Statement of Work" Section D, Sampling and Testing. The office memorandum states that; "there seems to be two areas that should be addressed; namely: 1. Abandoned oil and gas wells of unknown completion in the vicinity of the landfill could contaminate the lower aquifer. These drill holes would allow migration vertically, both upward and downward. These wells should be sampled. 2. Storm water/rainwater runoff during wet periods should be collected/sampled. Monitoring of situations such as this would require sampling during and after rain storms. Even though the major concern is the evaluation of groundwater, surface water, and soil contamination in the area near the landfill, it is possible that chemicals could be washed off the soil or with the soil and into the river during rain storms." The comments also note that; "the (testing) procedures are not efficient at assessing the loss of some contaminates, particularly in studies of the air samples in the vicinity of uncovered drums. Organic contaminates are not always efficiently extracted from all matrices, therefore, in areas where serious organic contamination is suspected or found, additional testing with a variety of leaching solutions would be required." The comments further state that; "an analysis of some of the samples taken from the buried drums would be necessary to predict levels of possible future contamination to be expected," and that; "Composite samples should be made from several drums and analyzed since there are so many drums. approximately 30,000 presumed to be buried in this landfill." The comments include a listing of waste reported to be at the site such as acetone, paint thinners (hydrocarbons such as naphtha, turpentine, or some other elecresinous solvent), solvents, plasticizers (phthalates, adipates, sebacate esters, polyglycols, ethylene glycol and its derivatives, tricresyl phosphate, castor oil, and camphor), lead, and cadmium.

May 6, 1985 - Martin Risch, Indiana State Board of Health Division of Water Pollution Control, letter to Mr. Philip Rust, 2025 Lola Drive, Marion, IN, notes high levels of sodium, chloride, and nitrate as results from analysis of sample of untreated well water obtained January 30, 1985. The letter states; "A map showing gas and oil industry drillings in Grant County indicates such old abandoned holes may exist in your area. Brine (saltwater) may be moving upward from depths around 1,000 feet through an unplugged well boring."

May 23 1985 - Jacqueline W. Strecker, Indiana State Board of Health Division of Land Pollution Control, letter to Ms. Cindy Nolan, U.S. Environmental Protection Agency -Region V, detailing comments on areas of concern over the Remedial Investigation and Feasibility Study's "Statement of Work" including: abandoned oil and gas wells: storm or rainwater runoff; testing procedures; a listing of waste reported to be at the site; and composite sampling of several drums with care to be taken to avoid the loss of volatile constituents during sampling (see 4/19/85 comments above for details). Other concerns of the letter included: the use of Inductively Coupled Plasmas (ICP) analysis; that the geophysical investigation will probably not reveal any useful subsurface information other than the definition of the landfill's boundaries due to buried drums and other metals; that an engineer or geologist shall conduct a remedial investigation to characterize the site and its actual or potential hazard to the public health and environment; drilling of monitoring wells using continuous split spoon sampling techniques; determination of aquifer characteristics by pumping tests or slugtests; additional parameters to the geotechnical test already prescribed such as coefficients of permeability, grain size distributions, cation exchange capacities, moisture content, and Atterburg limit tests; development of water table and/or potentiometric surface maps of the area underlying the site and geologic cross sections of the site: definition of horizontal and vertical components of groundwater flow; identification of aquifer characteristics such as thickness, extent, sorativity, transmissivity, hydraulic conductivity, confining layers, and flow rate; information on monitoring well design, construction, development, location, and length & elevation (depth) of screening intervals; location of surface water and groundwater hydrologic connections; preparation of a summary of geologic information of all previous and recent soil borings, area well logs, and/or published reports. The letter also indicates that Ms. Javne Browning is the new State Project Coordinator for the Marion/Bragg Dump.

May 28, 1985 - U.S. EPA Region V memorandum from Mark A. Vendl, Geologist, Technical Support Unit, to Jeffrey van Ee, Environmental Monitoring Systems Laboratory requests the assistance of Lockheed Engineering and Management Service Company, Inc. in conducting a geophysical survey at the Marion/Bragg Landfill, Marion, IN, at the end of August, beginning of September. Information from a summary on the background of the site taken from the Remedial Action Master Plan (RAMP) dated September 12, 1983, was included. The Mississinewa River is the dominate hydrological feature of the area. The site is an old gravel pit which was subsequently used for the disposal of various wastes. In general the landfill extends to within approximately 15-20 feet of the river's edge. The landfill area is poorly covered with sandy material. There are numerous places where debris, including 55-gallon drums, protrude from the fill. Leachate from the landfill has been observed seeping into the river. The Marion/Bragg Refuse Disposal site was operated by Delmar Bragg for the disposal of various waste materials, reportedly including toxic chemicals. Among deficiencies noted in inspections by the Indiana State Board of Health during the early 1970's were the acceptance for the disposal of hazardous or prohibited wastes, including acetone, plasticizers, lacquer thinners, enamels, cadmium, and lead. About 30,000 drums are believed to be buried at the site in a period of two years. In June 1975, Waste Reduction Systems, a division of Decator Salvage Inc., constructed a transfer station on the premises in order to transfer municipal refuse to an approved landfill in Wabash. By 1980, the site had been closed and all remaining refuse had been covered. Remedial action to date has included: installation of three shallow monitoring wells in June 1982 and limited groundwater and river water sampling and analysis. Marion lies within the physiographic unit known as the Tipton Till Plain. The surface geology of the site consists of gravel, sand, and silt, mostly valley-train materials and alluvium, with less than 2% slope. According to a 1982 report by Indiana Geological Survey, bedrock was approximately 100 to 200 feet below the surface in the vicinity of the site. The upper bedrock was primarily sedimentary rock of Silurian age, consisting of limestone, Dolomitic limestone and some shale. Total thickness of the layered sequence of bedrock throughout Grant County is approximately 3,500 feet. Grant County lies within the Wabash River drainage basin.

The Mississinewa River adjacent to the Marion/Bragg Landfill site, a major tributary of the Wabash, provides drainage for most of the county. Since 1923 when regular record keeping began, flow extremes in the Mississinewa River have ranged from a maximum of 25,000 cfs to a minimum of 3.4 cfs. Maximum recorded flood stage was reached in 1913, when flood water rose to an elevation of about 800 feet MSL near Fourth Street in Marion. Many areas adjacent to the river, including portions of the site, are subject to flooding. At least two aquifers are located beneath the site; the shallow aquifer is unconfined. When three existing monitoring wells were drilled in 1982, the shallow aquifer was encountered beneath 17.5 to 35.8 feet of sand and gravel. Refuse materials were encountered to a depth of about 25 feet in one boring. According to the Indiana Geological Survey's Special Report No.23 (1982), a deep aquifer is considered to exist in the upper 200 feet of bedrock.

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May 28, 1985 - U.S. EPA Region V memorandum from Mark A. Vendl, (continued)...

The City of Marion obtains its' drinking water from a tributary of the subsurface Teays Valley River aquifer system. Primary threats to public health resulting from previous operations at the Marion/Bragg site appear to be potential contamination of groundwater and surface water caused by hazardous chemicals leaching into nearby aquifers and the Mississinewa River. Unconfirmed reports suggest that over 38,000 people may be served by the aquifer of concern within a 2-mile radius of the site. Waters of the Mississinewa River flow northward through the City of Marion, and eventually into the Wabash, Ohio, and Mississippi Rivers.

The Environmental Monitoring Systems laboratory in Las Vegas conducted an aerial photographic analysis of the Marion/Bragg Dump. Black and white and color photographs from 1956, 1961, 1969, and 1984 were used in this analysis. Based on above information, the major objectives of the geophysical survey would be to locate the buried drums, and possibly locate the boundaries of the landfill itself. In order to accomplish this we would propose to run magnetometer and electromagnetic induction surveys over the whole landfill to locate areas where there are possible drums. Then ground penetrating radar surveys will be run on a 5 foot grid over the identified "hot spots" to further define buried drums. If time permits, other geophysical methods could be used to determine the local geology or contaminated groundwater. Preliminary discussions with Roy F. Weston, Inc., the consultant who will be doing the Remedial Investigation, indicates that they will be able to have a grid surveyed on the site before we start our geophysical survey.

July 26, 1985 - Transfer of ownership of parcel #005-02013-90 Center Township, from Paul E. & Mary Etta Gillespie to Mary Etta Gillespie. Transfer of ownership of parcel #005-02013-90 Center Township, from Mary Etta Gillespie to East Development Co., Inc., 5704 Lincoln Blvd., Marion, IN.

August 14, 1985 - Jayne E. Browning, Indiana State Board of Health Remedial Response Branch, office memorandum detailing August 8, 1985 site investigation pertaining to the geophysical investigation of the Marion/Bragg Dump with Ms. Cindy Nolan and Messrs. Nick Longo & Mark Vendl, U.S. Environmental Protection Agency -Region V; Mr. Aldo Mazzella, U.S. Environmental Protection Agency - Environmental Monitoring Systems Laboratory; Mr. Carlos Serna, Roy F. Weston, Inc.; and Mr. Mike Gibbons, Locke Engineering and Management Service Company, Inc. The memorandum notes that the geophysical investigation is scheduled to begin at the end of September or beginning of October, 1985. Two points of interest were noted while walking the site: 1. concerns the easy access to the site, particularly the pond area. A rowboat was observed docked at the west side of the pond where there was evidence of a campfire and tracks from three-wheel off-the-road vehicles were found in an open area near the pond; 2. cooling water from the asphalt company was observed discharging into the south edge of the pond in an area of stressed vegetation. The memo states that the ponds and two wells will be included in the sampling program on the former Mary Gillespie property now owned by Eastside Development Co. (Eastside Cove). Sampling of three ponds were conducted by Mr. Carlos Serna and Jayne Browning and copies of the Sampling & Analysis Plan and Health & Safety Plan were provided.

November 7, 1985 - Marion/Bragg Dump Potential Responsible Party (PRP) Meeting convened by Nicholas J. Longo, U.S. EPA - Region V CERCLA Enforcement Section, and Jon McPhee, U.S. EPA - Region V Office of Regional Counsel designates 16 PRP's. Attendees and PRP's listed include: Michael J. Kiley, Atlas Foundry Company; Delmar Bragg & J. B. Smith for Bragg Construction; Inc., Philip Comella for Central Waste Systems; Mayor Gene Moore for the City of Marion; Gene Amlin for City of Marion Utilities; Clement A. Revetti for Dana Corporation; Robert A. Metzger, Diamond-Bathurst, Inc.; Theodore E. Ravas, Jr. & James Heim & Ron Frase for Diversitech General: Jerome T. Chalwick, Essex Groups, Inc.; General Plastics Corporation; Wendy R. Barrott for General Motors; Marion Paving Company, Inc.; Rick Kabaker for R. M. Rivetna, National Can Company; A. Walter Long for Owens Illinois, Inc.; and Glenn Nestel & Bryan G. Tabler & Don Bauer for RCA Corporation. The PRP's attending the meeting expressed concern over the speed of proceeding negotiations and small number of designated PRP's. The PRP's caucused for 90 minutes and formed a committee headed by Bryan Tabler, RCA Corporation who was to forward to U.S. EPA recommendations to send more 104(e) letters to those identified in future submittals by the current PRP's and to allow more time for negotiations to occur pending the response of additional PRP's. The U.S. EPA memorandum states that: "The timetable that U.S. EPA is currently following is to have an indication of PRP commitment by the end of November with an agreement signed by January 1, 1986," and that: "Funds for this site have already been obligated. CDM is ready to let bids for drilling at the site, this will take 5 weeks to do. The Agency should determine whether or not to proceed with negotiations after receipt of Mr. Tabler's letter."

November 14, 1985 - Bryan G. Tabler, Barnes & Thornburg, 1313 Merchants Bank Building, 11 South Meridian Street, Indianapolis, IN letter to Messers. Jonathan McPhee and Nicholas J. Longo, U.S. EPA - Region V, provides the promised response to send materials indicating the identity of additional PRP's. Included in the response is a copy of the November 1974 John R. Schnell Engineers, Inc., report entitled 'Marion - Grant County Plan for Solid Waste Management'. The document identifies as having disposed of materials at the Marion/Bragg Dump some 31 companies, 8 municipalities, and 19 hauling firms, most of which were not on EPA's list of PRP's. Listed industries in the report are General Tire, RCA, Dana Corp., General Plastics, Glass Container, National Can, Owens-Illinois, Central Waste, Active Products, Atlas Foundry, Essex Int., Greene Line Mfg., Marion Utility Service Board, Peerless Machine and Tool, Foster Forbes, Allied Paper, St. Regis Paper, Anaconda Wire and Cable Co., Bell-Fiber Products, County Line Cheese Co., Delta Electric, Don Shane Tire Co., F-tig Canning Corp., Fisher Body (General Motors), Indiana Copper Corp., Long's Cleaners, McMillan Bloedel Containers, Marion Malleable Iron, Marion Tool Corp., Modern Laundry and Dry Cleaning, -obards Mfg. Co., Superior Metal Products, Sutter's Dairy Products, Tulox Plastics, T. & J. Plating Inc. Listed municipalities in this report are: Marion, Gas City, Jonesboro, Van Buren, Upland, Sweetser, Fairmount, and Matthews. Listed haulers are: Bailey's Disposal Service, Richard Brooks, Alex Brown, Central Waste Systems, Bill Crouch, Kelly Fanning, Ford Waste Engineering, Gamrath Industries, Charles Havens, L & R Disposal, Karl Martini, P & D Disposal, Earl Richards, George Riddle, San-A-Tainer Division, Universal Services, Wayne Waste Oil, Levon Wentz, Ben Zeigler.

December 20 1985 - Cindy J. Nolan, U.S. Environmental Protection Agency - Region V, Remedial Project Manager, letter to Mr. Dave Barley, Eastside Cove Company, discloses results of analysis from drinking water samples taken from the West Side Well Sample S07 (near the office) and the South East Well Sample S08 (near the water slide) on September 11, 1985. Results indicate barium 381 ppb & 78 ppb boron 143 ppb & 221 ppb; high iron 856 ppb & 849 ppb; strontium 1550 ppb & 1450 ppb; and zinc 611 ppb & 1250 ppb respectably. In addition sample results for the West Side Well Sample S07 showed trace amounts of arsenic 2.2 ppb and 1-(2-Butoxyethoxy)-ethanol 5.2 ppb.

December 20 1985 - Cindy J. Nolan, U.S. Environmental Protection Agency - Region V, Remedial Project Manager, letter to Mr. Bob Duckwall, Marion Paving, discloses results of analysis from two drinking water samples taken from a well at Marion Paving Company before a filtering system Sample S05 and after the filtering system Sample S06 on September 11, 1985. Results indicate barium 341 ppb; boron 131 ppb; high iron 1,600 ppb; high manganese 54.1 ppb; strontium 757 ppb; zinc 83.3 ppb and one unknown organic contaminant at 1.6 ppb.

December 27, 1985 - Remedial Investigation and Feasibility Study's "Work Plan" Revision 2. Section 4. Page 4-17 details Subtask 4.2 - Pond. River, Leachate Sediment Samples which states that sediment samples will be collected from three ponds (3 samples from the large pond on-site, 2 samples from the large pond off-site and 1 sample from the small pond on-site), the Mississinewa River (1 upstream sample, 1 adjacent sample, and 1 downstream sample), and two leachate drainage way samples. Subtask 4.3 - Pond, River and Leachate Seep Samples states that only two samples will be collected from the ponds because samples from four existing locations have already been sampled & analyzed. Both samples will be collected at the centers of the on-site and off-site ponds just above the bottom sediments. Page 4-20 details Subtask 4.4 - Monitoring Wells and Groundwater Samples states that: "The groundwater flow patterns for the aquifer systems within the vicinity of the Marion/Bragg Landfill site are not well-defined." Regional groundwater flow may follow the regional bedrock dip to the northwest, however on-site water table wells indicate local groundwater flow toward the Mississinewa River. Based upon existing subsurface data, there appears to be three hydrostratigraphic units beneath the site. From the ground surface downward there is: 1. a 60 foot thick glacial outwash unit composed of medium to coarse sand & gravel. The aquifer is unconfined and static water level is about 27 feet below the surface; 2. a 60 foot thick silty clayey till unit containing interbeds of sand & gravel which function as confined aquifers and yield significant amounts of water; 3. a consolidated aguifer system encompassing the upper 200 feet of dolomitic Sulurian limestone bedrock called the Waldron Formation. A phased approach for the groundwater monitoring program will consist of the initial installation and sampling/analysis of 9 monitoring wells in addition to the 3 existing FIT already wells on-site.

December 31, 1985 - Essex Group, Inc. - Thermopla's (2210 S. Branson, Marion, IN) Generator Annual Report lists 40,000 pounds of soil contaminated with lead compounds and 30 pounds of lead compounds for a one time cleanup of contaminated soil area and states that the process now produces about 5 gallons, 20-30 pounds in three months.

January 16, 1986 - Indiana State Board of Health memorandum from Javne E. Browning documents a January 8, 1986 site investigation with U.S. EPA's Remedial Project Manager Ms. Cindy Nolan; Mr. Nick Longo, U.S. EPA Enforcement; Mr. Carlos Serna. Roy S. Weston Inc.; Mr. Delmar Bragg, former Operator; and Mr. J. B. Smith, attorney for Mr. Bragg. Upon walking the site and discussing the history of operations with Mr. Bragg, the following information was revealed: 80-90% of the wastes was municipal in origin, the balance being industrial wastes; the City of Marion operated a dual waste collection system where garbage was collected and sent to the sewage treatment plant and non-putrescible waste was sent to the Bragg Dump; a map was outlined indicating the location of RCA Corporations disposal areas; burial was to an approximate depth of 15-20 feet into what was called clay; north of the pond wastes were buried in east-west trenches; barrels were burned. Mr. Bragg stated that he was not familiar with the Decator Salvage Transfer Station operation which ran from 1975 to 1977 since he left the site in July of 1975. The memorandum also mentions a public meeting scheduled for January 30 to kick off the Remedial Investigation/Feasibility Study (RI/FS) and results of analysis from drinking water samples taken September 11, 1985. No contamination was detected. The memo also states that Eastside Cove was surveyed where an illegal dump was discovered approximately one-fourth mile south. A referral was sent to the Solid Waste Branch and the Grant County Health Department was notified.

January 21, 1986 - Indiana State Board of Health memorandum from James R. Weat, Technical Support Branch, details staff comments concerning the "Marion Bragg Landfill Site Workplan, Technical Scope of Work" dated September, 1985. The memo expresses the need for more background data. Specifically a well located upgradient and off-site which is exposed to as little contamination as possible is needed to establish the natural background water quality data. The memo also corrects the Section 4.4.4 of the plan which indicates regional southwest dip in the upper bedrock. The correct direction of the upper bedrock dip is northerly towards the Michigan Basin. Because of the sand and gravel above the 60-foot thick till confining layer, at least one on-site deep bedrock well is needed to indicate by comparison of water level if there is a hydraulic connection between the upper and lower aquifers. If there is a large downward vertical gradient, there may be a need for a pump test.

January 23, 1986 - U.S. Environmental Protection Agency announces a public meeting to discuss the investigation of environmental hazards at the Marion/Bragg Landfill site on January 30, 1986, at 7:00 pm at the Grant County Complex Building. Art Gasior was listed as U.S. EPA's Community Relations Coordinator, and was the person to contact for more information.

February 7, 1986 - Indiana State Board of Health letter from Reginald O. Baker, Chief of Site Management Section, Remedial Response Branch, Division of Land Pollution Control to Ms. Cindy Nolan, U.S. EPA Region V Emergency and Remedial Response Branch regarding the Marion/Bragg Dump submits staff comments and areas of concern for Marion/Bragg Dump RI/FS draft work plan, Volume I - Technical Scope of Work and Draft Quality Assurance Project Plan (QAPP). Concerns include the need for more background data including an upgradient and off-site well to establish natural background water quality data: the existence of a northerly dip in the upper bedrock toward the Michigan Basin: the need to establish whether or not there is a hydraulic connection between the upper and lower aquifers and that the site name as listed on the National Priorities List is the Marion/Bragg Dump. All documents and correspondence should be titled correctly.

February 25 & 26, 1986 - Drinking water samples taken from City of Marion wells. Later date letter (no date) from Cindy J. Nolan, U.S. EPA Remedial Project Manager to Mr. Gene Amlin, Utility Manager, City of Marion details results of analysis which include high iron and manganese and sodium at 20,000 ppb. The letter states that the Agency for Toxic Substances and Disease Registry (ATSDR) recommends that residents advise their physicians of sodium levels greater than 20 ppm (20,000 ppb) because of the concern of for people with high blood pressure.

March 24, 1986 - Telephone call from Art Gasior, U.S. EPA Region V to Catherine Lynch, Indiana State Board of Health, Division of Land Pollution Control indicates that Catherine Lynch made Mr. Gasior aware of changes that need to be made in the final Community Relations Plan on pages 1,5, and 8. Ms. Lynch pointed out to Mr. Gasior that it was against EPA's practice to make the draft RI/FS available to the public and that the correct name of the site was listed on the NPL as the Marion/Bragg Dump, not Marion/Bragg Landfill. Mr. Gasior stated that he would check on these concerns.

May 5, 1986 - Letter from Cindy J. Nolan, U.S. EPA Region V Remedial Project Manager, to Mr. Greg Steele, Indiana State Board of Health, encloses a data summary for pond water samples taken last September from the Eastside Cove property in Marion, IN. Additional samples were taken in February. The letter states; "I appreciate your assistance in accommodating Mr. Dave Barley's request for a site Health Assessment." Enclosures included: Work Plan Volume 1; Drinking Water Results of September 11, 1985; ATSDR comments of drinking water memo, November 9, 1985; pond sample results, August 8, 1985; site map with sample locations (Note: on-site pond sample S02 analytical results indicate levels of aluminum 8,760 ppb; antimony, 56 ppb; arsenic 118 ppb; barium 1,180 ppb; beryllium 0.7 ppb; calcium 210,000 ppb; cadmium 39 ppb; chromium 28 ppb; cobalt 29 ppb; copper 204 ppb; iron 306,000 ppb; lead 188 ppb; magnesium 59,600 ppb; manganese 1,940 ppb; nickel 73 ppb; potassium 13,200 ppb; silver 23 ppb; sodium 47,900 ppb; vanadium 49 ppb; zinc 777 ppb. In addition the following parameters were not analyzed: boron, lithium, molybdenum, strontium, platinum, and yttrium.

July 7, 1986 - Project Status report on implementation of Phase II Field Work via Cindy Nolan, Remedial Project Manager, U.S. EPA, Region V indicates that Phase I was completed in March 1986 which included the installation and sampling of 9 monitoring wells and 3 FIT wells. River, pond and residential well samples were also taken. A total of 209 samples were included in Phase I. General findings include: several pesticides and low level volatile compounds were identified in the groundwater; leachate wells and borings contained PNAs and volatiles at higher concentrations (benzene 26-42 ppb); no organic contaminates were identified in the river, pond, or sediment samples; metals were present in all matrices. Conventional parameters (COD & ammonia) and the hydrology demonstrate that the landfill does exert an influence on the river water quality. Large ponds after groundwater flow such that approximately 80% of the groundwater flow through the landfill discharges from a narrow area at the north edge of the site. Water level measurements demonstrate an upward vertical gradient between the upper and lower aquifers. The deep aquifer well was removed at the end of Phase I because the annular space would not seal. No deep water aquifer wells are planned in Phase II. Cross section of the landfill shows that the lower portion is saturated. The till layer is at least 40 feet thick. The two aguifers being used are the shallow sand and gravel aquifer and the limestone aquifer. Weston has detailed the Phase II activities scheduled to take place in July in a memorandum dated June 30. 1986. Phase II activities are as follows: install three monitoring wells on the north face of the landfill area in the area of discharge to monitor groundwater quality and obtain additional gradient information; use two new monitoring well and one residential well to determine by water level measurements groundwater flow direction north of the river to ascertain if there is a regional aquifer which flows beneath the river; resample all existing wells, river, and ponds which will include two sets of data on 12 wells and one set of data on five wells to demonstrate if there is a seasonal variation in existing groundwater and river water quality; additional environmental samples were also planned. Additional work includes sampling of six residential wells; the depth of residential wells on Monroe Pike have recently been determined. The older homes on the western portion have shallow wells, the newer homes on the eastern portion have deep wells. Several samples for geotechnical analysis will be taken from existing sand/soil cap for permeability and depth estimates. Phase II summary: installation of five monitoring well (16 wells total); collection of 80 samples and costs of \$60,000.

July 7, 1986 - Agency for Toxic Substances and Disease Registry (ATSDR) memorandum to Ms. Louise Fabinski, Public Health Advisor, U.S. EPA Region V, gives an executive summary on the Health Assessment for Marion/Bragg Landfill (SI-86-149) Marion, IN. The memo highlights the submittal of results for 11 groundwater samples. Analysis of the data suggest no acute or long-term health concerns for the residents from daily ingestion of those compounds. Organic compounds and inorganic elements were detected in municipal and private wells in the surrounding community. Information on the uses of water for private wells were not included. Specifically, EPA has requested information on health effects associated with exposure to reported levels of strontium. The two documents reviewed included a May 22, 1986 letter to L. Fabinski from C. Nolan and a data package including analytical results of 11 wells tested for metals, volatile organic compounds, acids/bases/neutrals, and pesticides/polychlorinated biphenyls. Principal compounds of concern were strontium. iron, manganese, and sodium. Insignificant amounts of semi-volatile organics were detected. Concentrations of strontium range from 138 to 11,200 ppb; sodium concentrations ranged from 14,000 to 33,100 ppb; iron levels ranged from 912 to 3,030 ppb; and manganese levels varied from 9.5 to 259 ppb. There are no drinking water standards for strontium. The National Academy for Sciences has suggested a 7day SNARL (Suggested No Adverse Response Level) value of 8.4 ppm (8,400 ppb) for strontium based upon a 90-day feeding study in rats. The EPA has developed a draft Health Advisory for strontium in drinking water which indicates that the strontium levels reported in wells do not pose a significant threat to the public health. There is no National Primary Drinking Water Standard (NPDWS) for sodium. Municipal water supplies with levels above 20 ppm (note well WS03, Municipal Well number 11) should be monitored and the concentrations reported to EPA. Residents drawing drinking water from wells WS05, WS06, WS07, WS09, and WS10 should advise their physicians of the high level of sodium in their water. Concentrations of iron reported in all the wells tested exceed the 300 ppb standard and manganese levels reported in wells WS01, WS02, WS04, WS05, WS06, WS07, and WS08 exceed the 50 ppb standard. Conclusions indicate that the data presented show no acute or long-term health concerns to residents from exposures to inorganic elements or organic compounds in drinking water. The memorandum was signed by Jeffrey A. Lybarger, M.D.

July 30, 1986 - Indiana Department of Environmental Management memorandum from Jayne E. Browning regarding Responsible Party Search notes a May 22, 1986 visit by Mr. Rick Watson of Joseph I. Giarrusso Consultants, Inc. Mr. Watson representing RCA Corporation was trying to determine if additional Responsible Parties exist which were not named in the U.S. EPA's Potential Responsible Party (PRP) Search. After reviewing the Marion/Bragg Dump public files, Mr. Watson interviewed Ms. Browning and Mr. Dan Magoun. Mr. Watson was directed to contact Mr. Nick Longo and Ms. Cindy Nolan regarding the U.S. EPA's PRP Search. Before leaving, Mr. Watson indicated that he was going to Marion to interview City and County officials and residents in his search for information.

August 13, 1986 - Indiana Department of Environmental Management memorandum regarding Marion/Bragg Dump site visit of July 11,1986 from Jayne Browning details the July 8, 1986 arrival of the staff of Roy F. Weston Inc., to conduct Phase II sampling. Present were the following: Ms. Jayne Browning, State Project Manager; Messrs. James Burton, Carlos Serna, and Michael Pilarcek and Ms. Liz Uhl, Roy F. Weston, Inc.; and a well-drilling crew from ATEC Associates Inc. Monitoring Well 11 was installed north of the site across the Mississinewa River, along the north side of Monroe Pike. Split-spoon samples were collected at 1.5 foot intervals to 25-feet and at 5 foot intervals to the bottom of the borings. The well was an intermediate depth well installed to the base of the sand and gravel aquifer. Ms. Browning, Mr. Serna, Ms. Uhl, and Mr. Kirk Maravolo, Sanitarian, Grant County Health Department, were present during the drilling. Mr. Burton and Mr. Pilarcek, using a rowboat, collected water and sediment samples from the Mississinewa River. Mr. Serna and Ms. Browning collected additional samples at points reached by foot.

September 9, 1986 - Indiana Department of Environmental Management memorandum regarding project status from Jayne Browning details the completion of RI/FS Phase I work in March 1986 and Phase II in July 1986 (see above 7/7/86 Phase I findings via Cindy Nolan.) The memorandum notes that the schedule for completion of the project has been delayed by approximately two months because the lab analysis and data validation time was taking longer than anticipated. The current project schedule is: Draft RI - March 15, 1987; Final RI - June 15, 1987; Draft FS - July 15, 1987; Public Comments FS - September 24, 1987; and ROD - October 1987.

October 1, 1986 - Grant County Area Plan Commission violation report notes illegal use of Eastside Cove by the Rough Riders ATV Club. According to the report, the Rough Riders ATV Club (Phil Duce?) have an agreement to rent or lease the area they use.

February 7, 1987 - Grant County Area Plan Commission inspection notes dumping in Eastside Cove without a permit.

February 24, 1987 - Grant County Area Plan Commission letter informs Eastside (Cove) Development Company, Inc., that the recreational development commonly called "Rough Riders" does not have an Improvement Location Permit or Special Exception and the operation must cease immediately.

March 5, 1987 - Grant County Area Plan Commission letter to Mr. Dave Barley, Eastside Cove Development Company, Inc., explaining procedure to follow in obtaining Special Exception approval.

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March 30, 1987 - Larry Shepard, U.S. EPA telephone conversation with Mark Stanifer, IDEM Water Management regarding Marion Paving Company, Marion, IN reveals that the asphalt works discharges quench water into the on-site pond of the Marion/Bragg Dump. According to Mr. Stanifer, Marion Paving Company has an Industrial Waste Operating Permit (IWOP) issued on February 26, 1975. Indiana no longer issues such permits, however the existing permit is valid. The plant both withdraws and discharges water to the pond which is considered "private waters" by the State and is the basis of the IWOP.

April 28, 1987 - Grant County Area Plan Commission receives complaints of illegal dumping on Eastside Cove property.

May 27, 1987 - Grant County Area Plan Commission violation report establishes illegal dumping of unclean fill by Dick Bragg Excavating on Eastside Cove property. Photos were taken at 4:00 pm by Beverly Richards, Grant County Area Plan Commission Director.

July 13, 1987 - Waste Stream Analysis for Marion/Bragg Landfill by Cindy Nolan, U.S. EPA Region V Site Management Section, through Bernie Schorle, U.S. EPA Region V Chemical Evaluation Section and Jon McPhee, U.S. EPA Office of Regional Counsel attempts to summarize the quantity and sources of hazardous waste within the Marion/Bragg Landfill. Very little information is derived from the information requests. Most information is from secondary sources such as an Indiana State Board of Health memorandum documenting a conversation with Mr. Delmar Bragg about acceptance of liquid wastes and the 1974 Marion-Grant County Plan for Solid Waste Management. Much of the information in the Plan appears to be derived from Landfill records which has since then disappeared or been destroyed. Ms. Nolan states that; "I assumed RCA operated 26 years from 1949 until 1975, and all other companies used the landfill for its' entire duration, 18 years, from 1957 until 1975." Ms. Nolan also states; "Scrap metals, soda ash and lime, glass cullet, rubber and plastic scraps, etc. were not considered hazardous although they may contribute to groundwater problems. "RCA and General Tire appear to be the largest hazardous waste generators." "I assumed all of the waste referenced in this memo (ISBH memo identifying Central Waste as the hauler for General Tire and others) was from General Tire, although this may not be true." "In 1972, 60 tons per week of broken glass (from RCA) and 60 tons per week of miscellaneous trash were reported. The broken glass was pretreated with paint and other coatings. These coatings could be leachable and hazardous, while the glass itself would not be hazardous. The miscellaneous trash reported did contain hazardous waste. The quantity of hazardous wastes is about 4% of the 120 tons per week reported. However, other potentially hazardous wastes are listed without reference to volume." "Municipal sludge was also disposed of on site." "I have assumed it to be hazardous since it would have received the heavy metal discharges from local industry prior to pretreatment regulation." Ms. Nolan further states that; "Large discrepancies exist in the information provided from various sources, for example, in 1972, General Tire disposed of 475.2 tons of wastes and in 1974, 14,200 tons of waste are reported." "In summary, approximately 1.3% of the total 1.1 million cubic yard landfill volume estimate may be hazardous, based on existing documentation. Conservative estimates suggest that as much as 9.8% of the landfill volume may be hazardous."

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August 11, 1987 - IDEM memorandum from Jim Wheat, Technical Support Section, to Swapan K. Ghosh, Site Management Section, details comments based upon a review of the Feasibility Study for the Marion/Bragg Dump dated June 1987. The site occupies 72 acres on the floodplain of the Mississinewa River. There are five alternatives for remediation. They are divided into three parts for a RCRA cap, landfill cap, or filling in the on-site pond. The alternatives range from 4A-2 which, includes a multilayer cap; slurry wall; groundwater extraction and onsite treatment to a no action alternative. 4A-2 has a cost of \$30,767,000. Mr. Wheat states; "The site shows little contamination and most of the problem is in the sub-surface above the water table. Because there is little contamination and because of existing site conditions, I recommend alternative 1A for remediation. 1A includes; a sanitary landfill cap, access restriction, surface water management, and an on-going monitoring program. The landfill cap should be sufficient to contain the sub-surface contamination problem and not allow further contaminate migration." "The flood control measures should prevent the Mississinewa River from breaching its' banks and destroying remedial measures." "The monitoring wells assure us that the proper remediation has been implemented." Alternative 1-A has a total capital cost of \$7,171,000, a total O & M costs of \$807,000 and a total present worth of \$7,978,000. The annual O & M and replacement costs is \$52,000.

August 11, 1987 - IDEM memorandum from Reggie Baker, Chief Site Management Section. Office of Emergency Response to Larry Kane, Office of Water Management regarding RI/FS documents from the Marion/Bragg Dump which identify that arsenic and ammonia at the site might impact a 2-mile stretch of the Mississinewa River bordering the landfill. Mr. Baker states that; "After a discussion with staff of OWM (IDEM) and U.S. EPA, it was clear that the ammonia concentration at the site is unacceptable and arsenic is a potential threat for a Q7,10 flow of the river." Marion/Bragg Dump was principally a municipal dump which was operated between 1949 and 1975. Production of ammonia is a common phenomenon in any municipal landfill. The groundwater flows north, northeast and east from the Dump at a rate of 0.35 cfs to the river although fluctuations in the flow rate occur, we believe 0.35 cfs is a good representation of the average flow rate. The on-site pond (13 acres) also discharges to the groundwater. Ammonia concentrations between 0 and 24 ppm, and in the pond water the concentration ranges between 0 and 2 ppm. The level of ammonia concentration in surface leachate is high (about 30 ppm.) Mr. Baker further notes that; "Based on the calculations made by the staff of OWM, the above mentioned levels of ammonia at the site, are found to be unacceptable for discharges to the river. We may note, however, that if we assume a mean discharge, the level of ammonia will drop down to below the background values. It is also reasonable to assume that the ammonia has been discharging into the river as underground seepage across the entire site for more that 20 years." "Two alternative for remedy are under active consideration. The first one is to install a sanitary landfill cap and to monitor the water and biological samples from pond and river waters for 5 years." "The other option requires installation of a slurry wall and pumping and treating of groundwater and pond water. A sanitary landfill cap will be constructed to reduce precipitation infiltration. This option will reduce the rate of groundwater discharge into the river." Mr. Baker asks of Mr. Kane the following; "I am requesting your comment with respect to the protectiveness of the environment on the first option outlined above."

August 19, 1987 - 2.5" by 2" "notice" appears in the Marion Chronicle-Tribune entitled "EPA Officials to discuss Marion/Bragg Dump." The notice which states that; "Environmental Protection Agency Officials will meet with area residents at 7:00 pm today to discuss continued action at the former Marion/Bragg Dump. The site, on Central Avenue, next to the IOOF Cemetery, was closed in 1975 and placed on the EPA Superfund list as a hazardous waste dumping site in 1982. The EPA officials will offer their preferred plan on the site, which will include sealing and reseeding the area and continued studies of the groundwater." NOTE: the notice never mentioned where the meeting was to take place.

August 21, 1987 - IDEM letter from Reginald Baker, Chief, Site Management Section. Office of Environmental Response, to Ms. Cindy Nolan, Project Manager, U.S. EPA. Region V, regarding State comments on the RI/FS documents for the Marion/Braga Landfill include that; "The landfill contains an extensive list of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals in the waste borings, groundwater, leachates, and pond water. However, the levels of contaminates are low except in the southern half of the landfill. For some reasons, which we can not speculate, there are many VOCs in the soil but so few actually present in the groundwater. One possibility pointed out by our staff is the inefficient documentation procedure in the field of laboratory contamination. We make this suggestion because many of the blanks had the similar types and levels of concentrations as did the investigated samples. Sample number GW09 in the second phase of sampling contained methylene chloride at 330 ppb. Is this a real number? Although, not related to this site, the significance of the presence or absence of methylene chloride in the groundwater of GW09 cannot be over emphasized. A similar point in regard to laboratory analysis arises in the level of phthalates in groundwater. Are there levels in groundwater real, or do these phthalates come from the soil particles? If these are real numbers, their possible impact on the river water is of concern. Ammonia is one chemical which is wide spread throughout the entire site, and has impact on the river. The on-site ammonia concentration ranges between 0 and 49 ppm depending on the sample location. The river water contains 3 to 6 ppm of ammonia which is above the proposed limit of 20 ppb for protection of aquatic wildlife. We are working with our various options to us. In our view, the high levels of antimony, barium, cadmium, and arsenic in pond water are probably caused by one leachate seep. The mean values in the pond water will be considerably reduced if a proper dilution of the transient seep is taken into account along with the new set of pond water data. We would like to see such a calculation and the new mean values of different chemicals in the pond water. Other comments are listed separately. Thank you for your concern and continued efforts to clean up the site."

September 23, 1987 - William A. Cope, United Technologies Essex Group (2210 S. Branson, Marion, IN), letter to Mr. George Oliver, Indiana Department of Environmental Management, requests permission to dispose of PVC powder resin, calcium carbonate, and lead. Volume for immediate disposal requested was approximately 20,000 pounds with ongoing generation of 500-600 pounds per month at the Wabash Valley Reclamation site in Wabash County.

November 19, 1987 - David L. Barley, President, Eastside Cove Development Corporation, Inc., sends a letter to Betty Pence, Grant County Area Plan Commission, which states that; "The agreement between Eastside Cove and the club known as the Rough Riders has been terminated."

August 25, 1989 - United States Department of Interior, Fish and Wildlife Service, Bloomington Field Office, Indiana, letter from Daniel W. Sparks for David C. Hudak, Supervisor, to Mr. Bernard Schorle, RPM, U.S. EPA. The letter notes a July 14, 1989 telephone conversation between Schorle and Dan Sparks. Concerns about the Marion-Bragg Landfill expressed in the letter include: 1) The on-site pond and river provide suitable feeding and resting habitat for many species of migrating waterfowl. Many piscivorous birds are expected to be found in this area; 2) The site is within the range of the federally endangered Indiana bat (Myotis sodalis); 3) The selected remedy for the site. The letter references pages 16 & 17 of the ROD, monitoring of the interim remedy was expanded to include: a) Quarterly sampling of surface waters at three on-site pond locations and five river locations; b) Additional studies consisting of fish bioassay work for on-site and off-site ponds and the river; c) General toxicity tests on river ammonia levels. The letter further states that; "Based on information we received during the July 14, 1989, telephone conversation, the additional studies as described above probably will not be done."

January 11, 1990 - Indiana Department of Environmental Management office memorandum from Doug Montgomery, Technical Support Section to Gabriel Hauer, Site Management Section, through Larry Studebaker and Reggie Baker regarding September 29, 1989, Revision of QAPP for Marion (Bragg) Dump Monitoring during the RD/RA. The memo states that the revised QAPP/Monitoring Plan contains an attached Sampling and Analysis Plan. The memo comments on the following concerns:

"Section 1.1 - Within the introduction, reference is made to a fish bioaccumulation study and a biological survey which will be conducted only "if necessary". The State has objected to this failure to immediately address the impact of the landfill on the environment through a biological survey and bioaccumulation study. The Feasibility Study addresses the need to conduct these studies since the risk assessment is incomplete without them. People are consuming fish caught on-site and in the river near the landfill. Section 2.4 of the U.S. EPA document Risk Assessment for Superfund Volume II March 1989 states, "It is at this stage (RI/FS) that data collection for ecological assessment should be planned, including field studies, toxicity testing, bioaccumulation studies, and sampling..." Section 4.3 of the same U.S. EPA document states "ecological assessment is an integral part of the RI/FS Work Plan. Technical specialists should be consulted as early as possible in the development of the Work Plan and the Sampling and Analysis Plan, to ensure that the plans for ecological assessment are well designed and capable of answering the necessary questions about the ecological effects of the contaminants at the site". The RI/FS, QAPP, RAP, and Work Plan, all fail to provide for these studies which should be conducted in order to assess both the impact of the dump on the surface water aquatic life and the health threats to consumers of aquatic life."

January 11, 1990 - Indiana Department of Environmental Management office memorandum from Doug Montgomery, (continued)...

"Section 1.8.1.1 - According to the Consent Decree (CD), this is an interim remedy. The stated objective of the sampling should be reworded to reflect that monitoring data will be evaluated to "measure the effectiveness of this interim remedy", rather than to "show the effectiveness of this remedy".

"Section 1.8.1.2 - Ground water sampling is said to be related to appropriate standards. These standards must be defined. The March 13, 1989 memo from Lee Bridges to Swapan Ghosh regarding the ground water-surface water interaction contaminant load allocations discussed in Section 1.8.1.2 refers to the ERM calculated allowable discharge proposal as "voo-doo modeling".

"This section also discusses "average concentration of site related contaminants". Averaging results of shallow and deep monitor well samples to determine action levels, is not acceptable because this is equivalent to data manipulation. Further justification of this comment and objections to the improper plan to base biological studies on averaged data and the failure to offer a remedial action upon detection of action levels of contamination have been made to the U.S. EPA and PRPs in the State's May 10, 1989, comments on the draft RAP and Work Plans. Essentially, these plans are unprotective of the environment and are designed to trigger "no further action" or additional studies" even after action levels of contamination are found in monitor wells at the river. This is unacceptable. This QAPP is a continuation of the apparently technically flawed plan and requires resolution."

"The statement "dilution, as it occurs, may be considered as an additional 'safety factor'", is contrary to the intent of the Superfund amendments Reauthorization Act (SARA). Dilution of the dump pollutants by the river increases both the mobility and the volume of pollution."

"Section 1.9.1 - Ground water monitor wells must be located downgradient of waste as stipulated in the CD. Wells which fail to meet this criteria may need to be replaced. IDEM specifically requests that MB1 be located along the river per the Feasibility Study recommendation for well location. Subsequent water table measurements will show whether MB1 monitors water from the site or the cemetery."

January 11, 1990 - Indiana Department of Environmental Management office memorandum from Doug Montgomery, (continued)...

"Section 2.2.3 - The report states that purge water will be discharged to an "appropriate location". Appropriate locations and the parameters for disposal should be discussed at this time. Disposal on-site has been mentioned in discussions with PRP. The sewage treatment plant or an injection well may be appropriate disposal locations, however, on-site disposal may not be appropriate. The report is unclear about who will decided where the appropriate discharge location will be. State and Federal regulatory agencies should make that decision."

"Water samples from the pond would be collected near the surface and near the bottom to determine the presence of chemical which sink or float. The plan to collect at mid-depth will fail to determine the presence of contaminants which do not dissolve readily in water."

"Section 3.2 - Discharge of decontamination water on-site may mobilize contaminants or add detergents to the on-site contamination. The vague language about discharge to an "an appropriate location" must be clarified."

"Section 5, Future Studies - The ERM Future Studies are designed to avoid possible remedial action beyond a clay cap, a fence, and flood control. Biological studies and river sediment studies measure contamination in highly mobile aquatic life and mobile river sediments and are difficult to interpret when determining the landfill's influence on the river. To base additional remedial action on contractor interpretation of possible studies rather than on measurable contamination of individual monitor wells avoids the issue of contamination in ground water. Vague language referring to ground water and surface water standards needs to be replaced by defined limits. Adapting the monitor well data to an undefined "standard" and skewing results by averaging is manipulating data and risking the public's health. Delaying remediation and postponing biological studies allows a potential health risk to continue."

"Surface Water Sampling SOP - As previously discussed, sample collection at middepth of the pond will fail to assess the presence of chemical which sink or float."

"Attachment 5, Draft Ground Water Monitoring Plan Remedial Design/Remedial Action Monitoring and Additional Studies, Section 2.3 - This section discusses averaging of data from shallow and deep monitor wells in the event that a monitor well shows action levels of contamination. Averaging results of individual well samples is incorrect procedure; it fails to address the point of entry requirement addressed in both the ROD and SARA Section 121 (d)(2)(b)."

January 11, 1990 - Indiana Department of Environmental Management office memorandum from Doug Montgomery, (continued)...

"Section 7.1, paragraph 2 of the Feasibility Study states that "In the event monitoring indicates that action levels are exceeded, the decision to implement ground water extraction and treatment will be made by regulatory agencies at that time". The current plan fails to address this potential need for the ground water treatment system at the time of detection of action levels of contamination. The plan states that water level measurements will be taken immediately after well completion and again after development. A 24-hour period should pass after the well development before water level measurements should be taken. Also, the plan to cease water level measurements after one year should be reconsidered. Annual variations of the water table may be considerable and may affect the type and volumes of leachate. Both water level measurements and monitor well sampling should continue for a minimum time period despite early sample results which might cause a Decision Tree choice of no further evaluation. Water levels should be recorded with relation to mean sea level.

Reference is again made to comparison of data to "appropriate standards". The State has requested in the May 10, 1989, letter to EPA that these standards be defined."

"Section 2.4 - Very vague language about ground water quality suggests that monitoring might be discontinued at an early date. The statement is made, "should ground water quality remain relatively consistent over time, monitoring may not need to be as extensive and may be reduced". The phrases "relatively consistent" and "over time" are indefinite. The language should be quantifiable and specific."

"Section 2.5 - The Decision Tree for Future Studies is a plan to find nothing and do nothing. This is achieved by averaging the data from water quality results found in shallow wells with results found in deep wells to determine whether more studies will be conducted. Because shallow wells may assess different chemicals than deep wells, no further action may be the pre-determined result of any such data manipulation. Further possible remediation will occur only if a bioaccumulation study can be proven to show the impact of site related chemicals on river aquatic life. Such a link will be difficult to prove given unknown migration patterns of aquatic life and multiple upstream sources of pollution. The Decision Tree prevents a timely bioassay of the site and a prompt remediation if contamination is found in monitor wells."

January 19, 1990 - Indiana Department of Environmental Management office memorandum from Manuela C. Johnson, Technical Support Section through Larry Studebaker and Reggie Baker regarding technical comments regarding the planned canal work in the Mississinewa River near the Marion Bragg Dump. The memo asks: "Has the Army Corps of Engineers considered any possible erosion effects caused by the restructuring and protection of the opposite shore? As we noted during a recent site inspection some parts of the river bank on the Marion Bragg site contain or are composed of wastes from the Marion Bragg Dump. If there is an increase in water flow on the Marion Bragg banks then some of these wastes may be washed into the river.

Additionally, the wastes lining the river bank have not been characterized. Any activities which will effect the biota and animal life in the area will detrimentally effect the biological studies that are required to be performed on and near the site to assess the site's impact upon the river. It is these biological studies which shall trigger further remedial action or not. If the fish and biota relocate then such a study will not be accurate for determining the impact of the site on the river. This is in turn will affect any ability to determine if further remediation of the site is necessary."

January 30, 1990 - U.S. EPA file memorandum from Bernard J. Schorle regarding January 24, 1990 meetings on the Marion (Bragg) Dump site. Two meetings were held in Marion on January 24, 1990: in the morning meeting, the work that is to be done in the river near the site by Grant County was discussed; in the afternoon meeting, the work related to the construction and sampling at the site was discussed. in the morning meeting at 10:00 am at the Marion Inn, plans to remove a sandbar from the river with the building of a new culvert under Monroe Pike was announced. This work has been granted a Permit No. 89-051 (Application No. 89-IN-109) by the Department of the Army. This work will include the clearing out of the channel, building up the bank, and placing riprap on the bank. The morning meeting was attended by representatives of the Grant County Board of Commissioners, the Grant County Highway Department, Beam, Longest, & Neff, Inc., the agent for the county, IDEM, Corps of Engineers, and U.S. EPA. The work to be done in removing the sandbar will involve about 3700 cubic yards of material, some of which will be put on the river bank to build the bank out into the river. Only one of the borings that was made on the sandbar has been tested for contamination. 6000 cubic yards of material will be removed in removing the sandbar.

About 1500 cu, yd. will be used for underlayment. It was proposed to haul the excess material about 20 miles to a landfill to get rid of the mostly sand and gravel material. M. Johnson, IDEM, mentioned that no testing of the material has so far been done with respect to volatiles, semi-volatiles, and pesticides. G. Hauer, IDEM, brought up the fact that there is the possibility that biological studies will be carried out in the river and this work in the river might affect these. She also raised the question that the river work might affect the bank at the site.

January 30, 1990 - U.S. EPA file memorandum from Bernard J. Schorle (continued)...

D. Montgomery, IDEM, made a statement that these biological studies are the only protection to the environment, and he asked if some other method could be proposed for checking on the effect of the site on the river. He said that IDEM has not been in favor of the method that has been proposed, particularly with what triggers the biological studies. He brought up the averaging of some of the well results, and that IDEM was against this. It was pointed out that this work is planned to begin after June 30. The river bank on the north side will be built about 15 feet out into the river. It was decided that the State and U.S. EPA will look into what effect the work might have on the possible biological studies.

The meeting during the afternoon was attended by representatives of Chemical Waste Management (CWM), de maximis, IDEM, the Corps of Engineers, and U.S. EPA. Bob Rule, CWM, said that 9 (actually 8.5) of the 17 wells had been abandoned; clearing of the site is 70 to 75% complete; of the 10,000 feet of silt fence to be installed, only about 2000 feet remains to be installed; the perimeter fence is expected finished by Friday; and that the deep transfer station well appears to be plugged at about 23 feet, (maybe). The drain of Marion Paving where it comes out of the hillside on the dump would be cut off and it would be plugged with concrete. After the meeting, an on-site inspection was made to examine this drain and it could not be found. The inspection included findings of the glass extending 100 feet along the south shore of the on-site pond, and about 100 feet along the east shore, with further glass extending out into the water. It was decided to excavate some of the glass, to a depth of maybe two feet, then stabilize the area with stone. At the afternoon meeting, it was decided to have construction meetings on the first and third Wednesdays of each month, in the afternoon, starting around 1:30 pm. The availability sessions, when they are held, will be held that Wednesday evening. IDEM said that they would like to split an unknown number of samples.

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February 6, 1990 - Indiana Department of Environmental Management memorandum from Gabriel Hauer, Site Management Section, through Reggie Baker regarding public availability session on Tuesday, January 23, 1990, at the Marion Public Library, Marion, Indiana. Attendees included: Mr. Bernie Schorle, U.S. EPA; Craig F. Meuter, U.S. Army Corps of Engineers; Mark A. Travers, de maximis, media representatives, and seven citizens, one of which was Marijean Stephenson of the HEAL environmental group.

The attendants were informed of the following most recent on-site activities: 1) All 10 monitoring wells are installed; 2) The sampling of the wells and surface-water and river sediment will begin in the first week of February; 3) The fencing around the 72 acre site has been completed except for the south boundary of the dump; 4) The clearing of the area for the clay cap will be completed in March 1990.

The concerns of the citizens at the meeting were: 1) Function of the monitoring wells; 2) Erosion control along the river. Mr. Mark Travers said that bank-monitoring inspections will be done during the Operation and Maintenance Phase and the bank-stabilization will be performed if it is deemed necessary; 3) Ten acres on the south east side of the Superfund site have not been properly addressed in the RI; 5) Grant County Landfill.

March 14, 1990 - Indiana Department of Environmental Management letter from Reginald O. Baker, Chief, Site Management Section, Office of Environmental Response; to Mr. Bernhard Schorle, U.S. Environmental Protection Agency, Region V, regarding Indiana Sanitary Landfill Closure Requirements, Marion (Bragg) Dump, Clay cover: Soil Specifications, Construction Quality Control/Quality, Assurance Program and Maintenance Requirements. The letter addressed the following points: "(1) The soil selected for final cover should meet the following requirements: has a permeability of less than 10-6 cm/sec; has a minimum of 50% of weight of particle sizes passing sieve #200; has a plasticity index of less than 30; (2) The above listed soil requirements should be verified by performance of the appropriate soil tests in accordance with the American Society for Testing and Materials (ASTM) standards. Staff recommends the following frequency of various soil tests that should be performed to ensure proper construction of the clay cover... three evenly distributed pre-construction soil samples should be taken from a borrow area. At a minimum, grain size analyses, Atterburg limits, Modified Proctor Maximum Dry Density, and hydraulic conductivity tests should be performed on each obtained soil sample. It should be also verified that soil selected for the clay cap is uniform and meets all the other requirements as listed above.

March 14, 1990 - Indiana Department of Environmental Management letter from Reginald O. Baker, (continued)...

Additional soil tests must be performed during the construction of the clay cap: a) inplace densities and moisture-density curve performed very 1000 sq feet/lift of compacted soil: b) grain size analyses and Atterburg limit every 2000 cubic yard of cover soil; c) moisture content every 500 cubic yard or more frequent for controlling moisture addition; d) undisturbed hydraulic conductivity test (Shelby tube) every acre on the completed portion of the clay cap; (3) A quality control/quality assurance program needs to be provided and at a minimum must include the following: a) procedures for controlling moisture content in clay soil, removing of any rocks greater than 1/2 inches in diameter, and reducing soil clods to 2 inches before compaction begins; b) performance standards specifications for the construction of the clay cap to ensure that the requirements as listed in comment 1 of this memo have been met; c) procedures for controlling contaminated run-off and sediment at the landfill site during the construction phase; (4) The Operation and Maintenance Plan for the Marion (Bragg) Landfill provided a total closure cost estimate. However, a detailed description of the closure steps and a listing of materials, labor and testing necessary to close the facility, and a schedule for final closure of the facility was not included in the plan. According to the Solid Waste Rule 329 IAC 2-15-3 this information needs to be provided in the closure plan; (5) Final closure of the facility including closure certification must be performed in accordance with Solid Waste Rule 329 IAC 2-15-5; (6) In accordance with Solid Waste Rule IAC 2-15-7 post-closure requirements as listed in the submitted Operation and Maintenance Plan must be performed for a period of ten years following the date of final closure certification. The post-closure must be certified in accordance with Solid Waste Rule 329 IAC 2-15-9. The following additional duties should be implemented during the ten year post-closure period: a) maintenance of the minimum thickness of final cover and vegetation; b) maintenance of the final contours of the facility as shown on the maps entitled "Marion Bragg Landfill Closure-Top of Cap Grading, Plans I through V<sup>™</sup> and dated March 1989; c) maintenance of access control and benchmarks at the facility; d) control of any leachate or gas generated at the facility; (7) Staff noted that the post-closure estimate for the maintenance of final cover and vegetation included in the plan is less than those required by the Solid Waste Rule 329 IAC 2-15-8. Ten percent of the closure cost estimated for establishing final cover and vegetation at the site should be provided for the maintenance of final cover and vegetation during the ten year postclosure period.

March 14, 1990 - Indiana Department of Environmental Management letter from Reginald O. Baker, (continued)...

In addition to the above comments, staff recommends that all portions of the landfill site as delineated on the map entitled "Site Map, Marion (Bragg) Landfill: prepared by U.S. EPA and dated 1987, should be final covered regardless of steepness of the existing slopes. If the soil covering appears to be not feasible on the slopes steeper than 33% then other covering technique should be provided. The approximate landfill limits should be delineated on all closure plans prepared for the Marion (Bragg) Landfill. It was also noted that common fill material is planned to be used to bring landfill grades up to the required minimum slope of 2%. Staff recommends that only uncontaminated rocks, bricks, concrete, road demolition waste materials or dirt be used as a common fill.

August 21,1990 — U. S. EPA reply to Marion/Bragg Dump list of citizen questions... From: Bernard J. Schorle, Remedial Project Manager, U. S. EPA Region 5. Dear Ms. Stephenson: Enclosed are my responses to the list of questions that you gave to Karen Martin following the availability session that was held in Marion on August 21, 1990. I have attached to the list of my responses your list of questions, as you requested. Sincerely yours, Bernard J. Schorle, Remedial Project Manager:

Question 1) To what extent will the City of Marion, under operating and maintenance costs, be liable for future leachate and/or erosion problems which may or may not be addressed currently by U.S. E.P.A. and the PRP's? Specifically what is the City's future liability with regards to the river bank? Leachate along the river? Leachate entering the on-site pond? Leachate entering the off-site pond?

Answer 1) The responsibilities of the city of Marion under the proposed Consent Decree are outlined in the proposed Consent Decree, and this should be consulted especially Appendix H which requires the City of Marion to maintain the fence, the cap, and the flood protection measures. See also Paragraph VII.D.7.g of this proposed Consent Decree. The specific issues that you have raised are not discussed individually in the proposed Consent Decree, and therefore how these issues will be handled if they arise is dependent upon negotiations and agreements reached between the Generator Defendants and the City of Marion. The United States will be responsible for enforcing the terms of the proposed Consent Decree with regard to the maintenance of the fence, cap, and flood protection measures either by reinstitution of the action that is the subject of the proposed Consent Decree or by institution of a new action (Paragraph XXIX.B of the proposed Consent Decree).

Question 2) Has U.S. E.P.A. tested the river water for arsenic? If so, when, and what were the results?

Answer 2) River water samples were analyzed for arsenic during the remedial investigation, and the report for that investigation, which is available in the repository, which is located in the Marion Public Library, should be consulted for information about these samplings. No arsenic was detected in the river samples.

Question 3) Were site soils and exposed wastes characterized as hazardous characteristics as required by the Consent Decree? If so what were the results? If not, why not and why wasn't a notice of Significant Change issued?

Answer 3) The proposed Consent decree (Paragraph VII.D.7.c) requires that any liquid hazardous substances encountered during the regrading process, which are contained in drums, or any obvious areas of spilled liquid hazardous substances and materials contaminated by them, be characterized as required under 40 C.F.R. Parts 260 through 264. Only one drum, and no soil, has been found during the work done to date that has required this characterization. The material in this drum has been sampled but the results have not yet been reported; these results are expected within the next two or three months.

Question 4) Does U.S. E.P.A. feel they have adequately characterized the contaminates at the site and in the groundwater despite several deficiencies and inconsistencies in the remedial investigation? For example, lack of leachate characterization for the southeast portion of the site where the contents of 30,000 55-gallon barrels have believed to have been disposed of.

Answer 4) During the remedial investigation, the contamination in the groundwater was studied, and as a result of that study and the other investigations that were carried out, the present interim remedy was selected. This remedy includes additional studies of the groundwater and surface water to determine whether any additional remedial action will be required at the site.

Question 5) Was a notice printed in the local paper at the beginning of the comment period of the Consent Decree? If not, why not?

Answer 5) The proposed Consent Decree was lodged with the U.S. District Court for the Northern District of Indiana in Fort Wayne on July 20, 1990. The notice that the proposed Consent Decree had been lodged and that there was a thirty-day comment period beginning that day was published in the Federal Register on August 8, 1990 (page 32320). These acts were handled by the Department of Justice. On August 13, 1990, I determined that the notice of the lodging had been published, and on August 16, 1990 there was an advertisement published in the Marion Chronicle Tribune about the lodging and the comment period. On August 13, 1990 I verbally informed Ms. Marijean Stephenson, as I had promised her, of the publication of the notice about the proposed Consent Decree and the comment period. It is my understanding that the notice in the Federal Register is the notification that is required. The advertisement in the local paper was an extra effort by U.S. E.P.A. to let the local citizens know about the comment period. As a courtesy, the Agency got this advertisement into the paper as soon as possible after finding out the date of the beginning of the comment period.

Question 6) Were people notified by mail of the beginning of the comment period of the Consent Decree?

Answer 6) Yes, the people that are on the mailing list that U.S. E.P.A. maintains for this site were mailed a Fact sheet that, among other things, informed them of the beginning of the comment period. This Fact sheet was delivered to our Office of Public Affairs on Thursday, August 16, 1990, and immediately sent out.

Question 7) Will a public hearing be held before the federal judge on the Consent Decree and what procedures can the public follow in requesting such a hearing and/or extension of the comment period?

Answer 7) The Department of Justice is handling the lodging of the proposed Consent Decree and the recommendation as to whether or not it should be entered. Therefore, these questions should be asked of them. I would recommend that the party listed in the notice in the Federal Register to whom comments are to be sent be contacted on these questions. That party is: Assistant Attorney General, Environment and Natural Resources Division, Department of Justice, Washington, DC 20530; in writing, you should refer to United States v. Yount, et al., D.J. Ref. 90-11-3-251.

Question 8) Why are subsidiaries of Waste Management, Inc. (WMI), identified as PRP's, been required to settle and why are subsidiaries of WMI been paid to do clean-up work on the Marion/Bragg Dump considering State and Federal "Bad-Boy" laws let alone conflicts of interest?

Answer 8) No subsidiary of Waste Management has been required to settle with regard to this site. In fact, none of the named PRP has been required to settle with regard this site; those PRP that have settled have done so voluntarily. As far as I know, only one of the PRP, at the time they were named, was and is a subsidiary of Waste Management, Inc., and that is Central Waste Systems. The ENRAC Division of Chemical Waste Management, Inc. submitted a bid, at the request at the Settling Defendants, for the construction that was about 75% of the bid of the next lowest bidder. Chemical Waste Management, Inc., is 81% owned by Waste Management, Inc. After a thorough review by the Agency, it was decided that Chemical Waste Management, Inc. should not be rejected as the contractor for this job because there were not sufficient reasons for rejecting them.

Question 9) Why was work allowed to proceed when the RD/RA work plan has not been finalized nor approved by the State of Indiana when the Consent Decree prohibits the implementation of the remedy prior to finalization and concurrence with the State?

Answer 9) The proposed Consent Decree states that the RD/RA Work Plan and other required documents and reports shall be subject to review, modification and approval by U.S. E.P.A. in consultation with the State. The proposed Consent Decree also allows field activities to proceed in the absence of an approved RD/RA Work Plan if this is mutually agreed by the parties.

Question 10) How were the locations determined for the placement of the wells?

Answer 10) The well locations were selected in order to place two wells in each of the zones shown in Figure 6-2 of the report for the Feasibility Study. The wells were placed as close to the edge of the river as possible or at the site boundary so that they would be outside the fill area. The background wells were placed upgradient of the site.

Question 11) Since the site boundaries still have not been totally determined, what wells have been placed through the landfill materials or are close enough to be subject to influence from groundwater mounding and/or leachate?

Answer 11) The boundaries of the site have been determined by a survey of the property described in the legal description of the property that was leased for the dumps. One of the new downgradient monitoring wells has been drilled in an area where there are waste materials. The wastes lay several feet above the screened interval of the well and have been sealed off from this screened interval. The monitoring wells are designed to sample water from the area opposite and screen and the sand pack, which extends slightly above the screen.

Question 12) How were background and investigative wells determined?

Answer 12) Background wells are located upgradient from the area being studied or to the side of this area, and investigative wells are located in the area being studied or downgradient from it.

Question 13.) Since the hydrogeologic investigation of the flow of groundwater was based solely upon measurements of the surface of the upper water table aquifer and no pumping tests or other hydrogeologic evaluation were performed, how can U.S. E.P.A. and the PRP's be certain that wells are upgradient or downgradient from the site? How can U.S. E.P.A. and the PRP's be certain that the Mississinewa River acts as an "hydraulic barrier"? Might not other explanations for the upward gradient of the lower aquifer be possible? For example, could interconnections either natural and/or man-made, (such as gas wells) along with gas pressures created within the Marion/Bragg Dump exert influences that could account for the displacement of the lower aquifers or the upward gradient of the bedrock aquifer?

Answer 13) The conclusion that the groundwater in the upper aquifer discharges into the Mississinewa River was presented in Section 2.6.1 of the report for the remedial investigation. This conclusion was based upon the data obtained. Besides the upward gradients measured in well clusters, that are mentioned in the question, the conclusion was also based upon the fact that the horizontal gradient on the other side of the river is toward the river. Whether a given well is upgradient or downgradient of the site is based on the gradients determined from the data. Water elevations in the lower aquifer were also measured. The vertical gradient throughout the glacial till that separates the two aquifers is upward. There was no evidence during the remedial investigation of significant gas pressure existing in the fill area or of interconnections between the two aquifers.

Question 14) What are the flood protection measures for the site?

Answer 14) On those areas of the cap that are exposed to the river and are below the elevation of the 100-year flood, erosion control matting will be placed.

Question 15) Please provide a complete list of all contractors and all laboratories utilized since the Marion/Bragg Dump was scored (please include sub-contractors).

Answer 15) According to the remedial investigation report (Section 3), samples from all matrices, except water supply, were analyzed by laboratories in the Contract Laboratory Program. Water supply samples were analyzed by the U.S. E.P.A. Central Regional Laboratory. Appendix A gives the laboratories where samples were sent. Samples were sent to laboratories where they could be analyzed within the time period required. I have not been on this project since the beginning and, therefore, I can not be sure of all the contractors and subcontractors that have worked on the Marion (Bragg) Dump site project. From a cost summary that was prepared, the following have apparently worked on this project: Camp Dresser and McKee (remedial investigation/feasibility study); CH2M Hill (remedial action master plan); Ecology and Environment, Inc. (assist in ranking potential Superfund sites using MITRE model); Sample Management Office (laboratory analytical support, using the labs: CAL, Versar, RMAL, WCTS, Gulf, Claytn, ERG, PEI, S3, Hazlet, CENREF, GCA). There were probably others, particularly subcontractors, but a list of them is not available. From the cover of the report for the remedial investigation, any one or more of the following may have worked on the remedial investigation and feasibility study under Camp Dresser & McKee Inc.: Roy F. Weston, Inc.; Woodward-Clyde Consultants: Clement Associates, Inc.: ICF Incorporated; C.C. Johnson & Malbotra, P.C.

Question 16) What does U.S. E.P.A. mean by "if necessary" additional tests on groundwater and surface water will be done? Is this a change from the public hearing and Record of Decision in which the public was told that these things would be done? Why hasn't this been considered a Significant Change, and why hasn't a Notice of Significant Change been issued?

Answer 16) The additional testing that is to be done for the groundwater and surface water is outlined in the Remedial Action Plan that is Appendix B of the proposed Consent Decree. The planned testing is explained there. There is not change requiring notice at this time.

Question 17) Since the site is being closed in accordance with State regulations, what State statutes or regulations allows the averaging of monitoring well results or the use of geometric mean values instead of maximum contaminates concentration values?

Answer 17) In the Remedial Action Plan, the use of the average concentrations of siterelated contaminants in groundwater discharging from a zone of the site is called for as part of the decision tree for future studies. The actual concentrations in each of the wells will also be available.

Question 18) Has U.S. E.P.S. administratively through documents (Consent Decree, attachments, and/or Remedial Action Plan) negotiated after the public hearing, Record of decision, and signing of the Consent Decree what is in effect a final remedy for the Marion/Bragg Dump? Why has U.S. E.P.A. allowed the negotiation and approval of these documents which make substantial changes in language and/or intent of the Record of Decision and Consent Decree in addition to what the public was told at the Public Hearing? Why has not a Notice of Significant Change been issued?

Answer 18) A final remedy has not been decided upon for the Marion (Bragg) Dump site. There is no change requiring notice at this time.

Question 19) How many more availability sessions will U.S. E.P.A. have in the Marion Community on the Marion/Bragg Dump?

Answer 19) The number of further availability sessions for the Marion (Bragg) Dump site has not been determined. Future availability sessions will be held as the necessity arises.

## Site Preliminary Assessment & Hazard Ranking Score:

July 28, 1982 - Jim Knoy, Indiana State Board of Health, ranks the Marion (Bragg) Dump in Grant County, Indiana using the Hazard Ranking Score system and scores the site with a SM = 35.25 and SDC = 62.5.

The site is described as an "abandoned facility" which "accepted large volumes of hazardous wastes, surface runoff contamination has been documented." The HRS Cover Sheet notes; "Further ground water tests may be necessary."

Record Of Decision finalized on September 30, 1987; signed by Valdas Adamkus, U. S. EPA Region V Administrator